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ENVIRONMENTAL VARIANCE REQUEST REVIEW SHEET

CASE: SP-2011-0282D **ZAP COMMISSION DATE:** July 3, 2012

PROJECT NAME: Lazy Nine MUD 1A Treated Effluent Holding Pond

APPLICANT: Wheelock Street Capital
(J. Robert Long)

AGENT: Malone Wheeler, Inc.
(Seth Mearig)
(512)899-0601

ADDRESS OF SITE: 16801 ½ W SH 71

COUNTY: Travis

AREA: 24.4 limits of construction

WATERSHED: Little Barton Creek (BSZ)
Lake Travis Watershed
Water Supply Rural

JURISDICTION: 5-mile ETJ

PROPOSED DEVELOPMENT:

The applicant is proposing to construct an effluent holding pond with associated access/maintenance drives and irrigation fields. The pond will provide storage of treated effluent from the Lazy Nine MUD. The applicant is requesting approval of an environmental variance from LDC 25-8-341 to allow cut up to a maximum of 25 feet.

DESCRIPTION OF VARIANCES:
Variance requests as follows:

1. The applicant is requesting approval of an environmental variance from LDC 25-8-341 to allow cut up to a maximum of 25 feet to construct the effluent holding pond.

STAFF RECOMMENDATION:
Staff recommends approval of this variance with no additional conditions. The findings of facts have been met (see attached).

ENVIRONMENTAL BOARD ACTION:

June 20, 2012: The Environmental Board recommended approval of the variance requests from LDC Sections 25-8-341 to allow cut up to a maximum of 25 feet for the Lazy Nine MUD treated effluent holding pond, SP-2011-0282D. Vote: 4-0-0-3.

ZONING AND PLATTING COMMISSION ACTION:

ENVIRONMENTAL REVIEW STAFF: Jim Dymkowski **PHONE:** 974-2707
James.Dymkowski@austintexas.gov

CASE MANAGER: Michelle Casillas **PHONE:** 974-2024
Michelle.Casillas@austintexas.gov

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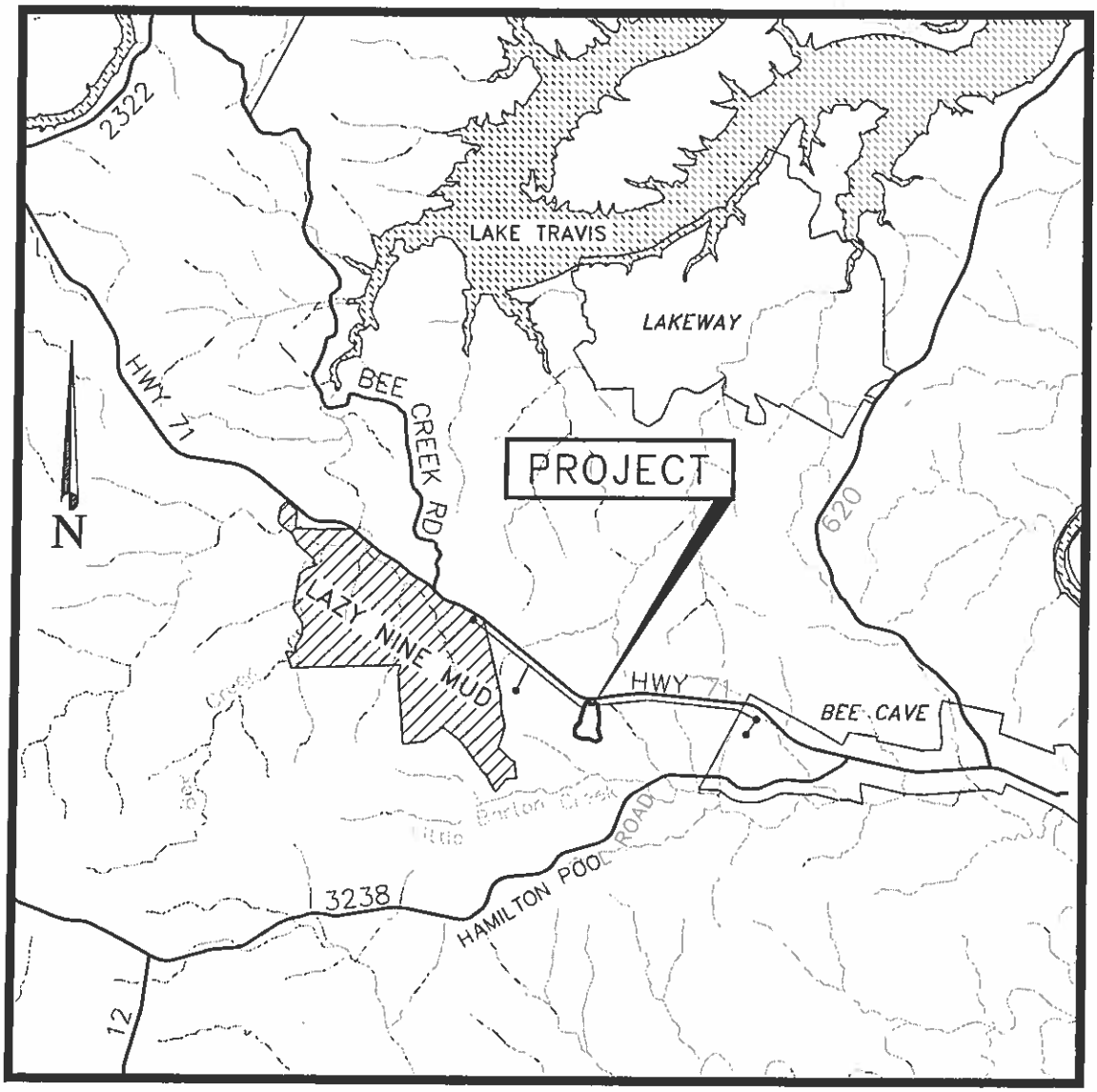

PROJECT LOCATION IS APPROXIMATELY THE 16200 BLOCK OF STATE HIGHWAY 71 ON THE SOUTH SIDE OF THE HIGHWAY.

LOCATION MAP

NOT TO SCALE

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ENVIRONMENTAL BOARD MOTION 062012 6a

Date: June 20, 202

Subject: Lazy Nine MUD SP-2011-0282D

Motioned By: James Schissler Seconded By: Bob Anderson

RECOMMENDATION

The Environmental Board recommends approval of Lazy Nine MUD.

RATIONALE:

The greater depth allowed by variance will minimize the overall impact to the environment of the pond.

Vote 4-0-0-3

For: Anderson, Maxwell, Neely & Schissler

Against: None

Abstain: None

Absent: Gary, Perales and Walker

Approved By:

Mary Gay Maxwell
Environmental Board Chair

Agenda item 6a

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ITEM FOR ENVIRONMENTAL BOARD AGENDA

BOARD MEETING DATE REQUESTED:	June 20, 2012
NAME & NUMBER OF PROJECT:	LAZY NINE MUD 1A TREATED EFFLUENT HOLDING POND SP-2011-0282D
NAME OF APPLICANT OR ORGANIZATION:	Sweetwater Wheelock Street Land [Contact: J Robert Long - Project Director- (512)796-6601]
LOCATION:	16801 1/2 W SH 71
PROJECT FILING DATE:	September 30, 2011
WPDR/ENVIRONMENTAL STAFF:	Jim Dymkowski, 974-2707 james.dymkowski@austintexas.gov
WPDR/ CASE MANAGER:	Michelle Casillas, 974-2024 michelle.casillas@austintexas.gov
WATERSHED:	Little Barton Creek (Barton Springs Zone) and Lake Travis (Water Supply Rural) Drinking Water Protection Zone
ORDINANCE:	Comprehensive Watershed Ordinance (current Code)
REQUEST:	Variance requests are as follows: 1. To allow cut greater than 4 feet not to exceed 25 feet [LDC Section 25-8-341]

STAFF RECOMMENDATION: Recommended for approval.

REASONS FOR RECOMMENDATION:	Findings of fact have been met.

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MEMORANDUM

TO: Betty Baker, Chairperson
Members of the Zoning and Platting Commission

FROM: Jim Dymkowski, Environmental Review Specialist Sr.
Planning and Development Review Department

DATE: June 20, 2012

SUBJECT: Lazy Nine MUD 1A Treated Effluent Holding Pond - SP-2011-0282D

VARIANCE REQUEST: To allow cut greater than 4 feet not to exceed 25 feet (LDC 25-8-341)

Introduction

This variance request is identical to that proposed with Site Plan Permit #SP-2010-0034D that was formerly reviewed and recommended by the Environmental Board on April 7, 2010. Although it was determined the Findings of Fact had been met, the Environmental board recommended approval with conditions. The variance then was presented and approved by the Zoning and Platting Commission on April 20, 2010 also with conditions. Staff and the applicant were unable to complete the permit review process prior to the review time for that 2010 permit expiring. The previous variance approval also expired with that incomplete 2010 permit.

Description of Project Area

The proposed approximately 25 acre development is located at 16801 ½ W SH 71, and will occur within a roughly 98 acre drainage easement that has been dedicated to the Lazy Nine Mud District 1A for the construction of the proposed effluent holding pond. The site is within the City of Austin 5 Mile ETJ. A small portion of the project is in the Lake Travis Watershed, which is classified as Water Supply Rural while the larger portion of the project is within the Little Barton Creek Watershed, which is classified as Barton Springs Zone. Both watersheds are classified as Drinking Water Protection Zone.

The applicant is proposing to construct an effluent holding pond with pumping mechanisms, mainlines for future re-irrigation and an access/maintenance drive. This pond will provide storage of treated effluent from the Lazy Nine MUD. The Lazy Nine MUD was created in Travis County, outside of the City of Austin jurisdiction. The proposed effluent holding facility is not included in the MUD boundaries and is within the City of Austin 5-mile extra-territorial jurisdiction.

The volume capacity for the pond is 64.5 acre feet with a proposed surface area of approximately 3.5 acres. The proposed pond has been designed consistent with the original 2006 State issued TCEQ permit #WQ0014629001(renewed and amended October 18, 2011) that also incorporates provisions of a settlement agreement between the property owner and the City of Austin at that time in 2006.

The majority of the project lies within the Barton Springs Zone and requires water quality treatment for all proposed impervious cover. The site plan for this project is proposing water quality to be provided by vegetative filter strips for the proposed access/maintenance drive.

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Vegetation

The site is situated on land that has been historically used for grazing. The vegetation on site consists of a tree canopy dominated Live oak, Ashe juniper, and Spanish oak with an understory of Agarita, Ashe juniper, prickly pear cactus, and grasses predominantly of buffalo grass and bluestem varieties.

Critical Environmental Features

There are two classified, minor waterways adjacent to the dedicated MUD easement boundaries. Both waterway sections maintain the required critical water quality and water quality transition zone setbacks for this watershed classification and these setbacks do not encroach within the easement or project boundaries. Neither is directly impacted by the proposed project. The confluence of these two tributaries near the southeast corner of the easement boundary is approximately 1,460 feet from the mainstream of Little Barton Creek.

Water/Wastewater

This project does not require any water or waste water service.

Variance Request

A variance from LDC Section 25-8-341: Cut requirements.

The applicant is proposing to construct an effluent holding pond with pumping facilities and an access/maintenance drive. The volume capacity for the pond is 64.5 acre feet with a proposed surface area of approximately 3.5 acres. The sizing of the pond is consistent with that proposed in the 2006 State issued TCEQ permit #WQ0014629001 as amended and renewed in 2011 for this facility. It is also consistent with the settlement agreement entered into between the Applicant and the City of Austin in 2006. The proposed construction is sited along the shallowest portion of a hillside slope to limit the overall cut required. The cut up to a maximum of 25 feet is required to provide the necessary volume for the pond on this slope while minimizing the overall site disturbance area.

Recommendation

Staff as done previously, once again recommends approval of this variance request with no additional conditions. The required Findings-of-Fact have been met (see attached).

Similar Cases and Additional Background Information

The following projects had similar construction issues and received recommendations from the Environmental Board that were subsequently approved by the Zoning and Platting Commission:

Lazy Nine Mud Treated Effluent Holding Pond SP-2010-0034D was recommended by the Environmental Board vote of 7-0-0-0 on April 7, 2010 with the following conditions:

1. The applicant will implement a program to restore native grasses and other native plants in conjunction with the University of Texas Wild Flower Center.
2. The applicant will participate in the Ecological Laboratory program with the State of Texas by allowing access to their property for research.

Included on pages 9A and 9B please find a copy of the original Environmental Board draft motion and a copy of the approved Zoning and Platting Commission motion to show how the final motion was worded and approved.

Staff has also included in this backup, some of the questions and associated responses that arose with the previous identical variance request:

1. Provide maps showing Little Barton Creek, and how far this project is from Little Barton Creek? An aerial map showing Little Barton Creek and its approximate distance of 1,460 feet from the confluence of the two adjacent tributaries and a close up view of the site with topographic information is again included with this new submittal on pages 12-13. The applicant has also provided additional exhibits indicating the project location in relation to Little Barton Creek and overall watershed information. These are again included in their additional backup material at the end of the packet.
2. A copy of the TCEQ permit and Settlement agreement: Both documents, including the renewed and amended TCEQ permit have again been included in this submittal on pages 14-49 and 50-55.
3. An explanation of what a 1015 permit is and what that means to water quality for this facility in relation to the City of Austin similarly permitted facilities: A 1015 permit explanation and a list of other COA treatment plants and their permit types have been added to this submittal on pages 56-58. It is again provided by City of Austin staff Mr. Rajendra P. Bhattarai, P.E., DEE, Division Manager with the Environmental and Regulatory Services Division of the Austin Water Utility. He can be contacted prior to the meeting if you have any additional questions at 512-972-0075.
4. Photographs of the site: Staff site photos are included on pages 59-63. The applicant has also again provided their own back up photos in their additional material backup at the end of this packet.
5. Who is the contact person with TCEQ that does the annual inspections and the single point of contact person? Staff is aware from conversations with the applicant that they are continually in contact with TCEQ, but at the time of packet preparation staff had not been provided a final response from the applicant on this issue. The applicant will be available to respond on this issue.
6. A statement in writing addressing TCEQ's response to the question of the 2.5/3.5 acre pond surface area variation between the applicant's plan submittal and the existing TCEQ permit. Staff has again included the original memo from the applicant addressing their past conversations with TCEQ on this issue on pages 65-67. Since that time, the applicant has filed their permit renewal with TCEQ and completed their amendment of the permit to change the pond surface area requirement to match the 3.5 acre total proposed with this site plan permit application.

If you have any questions or need additional information, please contact me at 974-2707.

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Jim Dymkowski, Environmental Review Specialist Senior
Planning and Development Review Department

Environmental Program Manager: Sue Barnett
Sue Barnett

Environmental Officer: Chuck Lesniak
Chuck Lesniak

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Planning and Development Review Department
Staff Recommendations Concerning Required Findings
Water Quality Variances

Application Name:	**Lazy Nine MUD 1A Treated Effluent Holding Pond**
Application Case No:	**SP-2011-0282D**
Code Reference:	**LDC Section 25-8-341**
Variance Request:	**To allow cut greater than 4 feet not to exceed 25 feet.**

A. Land Use Commission variance determinations from Chapter 25-8, Subchapter A – Water Quality of the City Code:

1. The requirement will deprive the applicant of a privilege or the safety of property given to owners of other similarly situated property with approximately contemporaneous development.

   Yes. A facility of this type is regulated by the State through a TCEQ operating permit. This facility, as with similarly regulated sites is permitted based on a specific holding capacity. To meet this requirement and be consistent with the facilities existing TCEQ permit for operation, the applicant proposes cut up to 25 feet.

2. The variance:

   a) Is not based on a condition caused by the method chosen by the applicant to develop the property, unless the development method provides greater overall environmental protection than is achievable without the variance;

   Yes. The required storage can not be reasonably provided without the requested variance. Compliance with the 4' cut limit would increase site disturbance and would likely require multiple pond excavations.

   b) Is the minimum change necessary to avoid the deprivation of a privilege given to other property owners and to allow a reasonable use of the property;

   Yes. The proposed fill is the minimum necessary to ensure the proposed State permitted pond capacity volume is provided and to minimize the surface area disturbance.

   c) Does not create a significant probability of harmful environmental consequences; and

   Yes. This variance will not increase harmful environmental consequences. The proposed effluent holding pond will be constructed in compliance with the TCEQ permit. Additionally, the pond will be lined to prevent absorption of the contained water into the surrounding soil.

The project is providing water quality for all proposed impervious cover. The project does not include any encroachment into the adjacent classified waterways or critical environmental feature setback areas.

3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.

   Yes. The proposed cut allows this pond to be constructed with less surface area disturbance and reduced potential for erosion and sedimentation of adjacent downstream waterways. Water quality treatment is proposed for impervious cover associated with the access maintenance drives for the facility.

B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-393 (Water Quality Transition Zone), Section 25-8-423 (Water Quality Transition Zone), Section 25-8-453 (Water Quality Transition Zone), or Article 7, Division 1 (Critical Water Quality Zone Restrictions):

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1. The above criteria for granting a variance are met;

   N/A.

2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and

   N/A.

3. The variance is the minimum change necessary to allow a reasonable, economic use of the entire property.

   N/A.

Reviewer Name: **Jim Dymkowski**

Reviewer Signature: _____

Date: **June 6, 2012**

Staff may recommend approval of a variance after answering all applicable determinations in the affirmative (YES).

Malone/
Wheeler, Inc.

Engineering & Development Consultants

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May 25, 2012

Ms. Michelle Casillas
City of Austin
Planning and Development Review Department
505 Barton Springs Rd.
Austin, TX 78704

Re: Request for Cut Variance – Summary of Scope
Lazy Nine Municipal Utility District Treated Effluent Holding Pond
Case No. SP-2011-0282D

Dear Ms. Casillas:

The applicant for the Lazy Nine Municipal Utility District 1A Treated Effluent Holding Pond (the Pond) is requesting a variance from the City of Austin's requirement that cuts be limited to a maximum of 4-feet. Pursuant to negotiations with the City of Austin in 2006, the Pond will require cut depths varying from 1-foot to 25-feet. The pond location was specifically chosen to minimize ground disturbance, limit visibility from S.H. 71, minimize import of fill material or export of spoil material and minimize removal of trees.

The volume of the Pond as required by the TCEQ Permit for Domestic Wastewater Treatment Operation, Permit No. WQ0014629001, originally issued November 27, 2007 and renewed October 18, 2011, is 64.5 acre-feet with a surface area of approximately 3.5 acres. The maximum depth of the Pond is 32-feet.

The Pond is sized to meet the requirements of the TCEQ Permit for Domestic Wastewater Treatment Operation. The volume and surface area of the Pond were also specifically referenced in the settlement agreement between Lazy Nine MUD, the City of Austin and the Lower Colorado River Authority dated December 2006 in SOAH Docket No. 582-06-2596.

Due to TCEQ design criteria and permit stipulations requiring a minimum of 2-feet of freeboard, the Pond volume with a cut limit of 4-feet would be approximately 6.4 acre-feet. Preliminary engineering studies have shown that up to 10 ponds with over 10 times the amount of disturbed area would have to be constructed to meet the City of Austin cut requirements while providing the same holding capacity of the Pond as currently designed.

7500 Rialto., Bldg. 1, Suite 240, Austin, TX 78735
Phone: 512-899-0601 Fax: 512-899-0655
Firm Registration Number F-786

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Environmental benefits gained from granting the variance for cut depth include minimizing the disturbed area required to construct the Pond, reducing the number of trees to be removed, minimizing truck traffic during construction and minimizing the construction of impervious cover for access roads that would be required to maintain multiple ponds after construction is complete.

Sincerely,
Malone/Wheeler, Inc.
TBPE Firm # F-786

Seth A. Mearig, P.E.

Malone/
Wheeler, Inc.

Engineering & Development Consultants

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Appendix U – Finding of Fact

For Administrative Cut Variance

Lazy Nine MUD 1A Treated Effluent Holding Pond

Case # SP 2011-0282D

1. Yes. Strict application of the ordinance for maximum cuts would require the Treated Effluent Holding Pond to occupy a footprint at least 10 times larger than the proposed design. In addition, any alternative design would not be in compliance with the TCEQ Permit #WQ0014629001, which the City approved in that certain Settlement Agreement styled SOAH Docket No. 58-06-2596; TCEQ Docket No. 2006-0688-MWD In Re: APPLICATION OF LAZY NINE MUD AND FOREST CITY SWEETWATER LIMITED PARTNERSHIP for Proposed Permit WQ0014629001 before the State Office of Hearing Examiners.

2. Yes. The depths of the cuts and fills for the Treated Effluent Holding Pond were based upon optimizing the efficiency of the storage volume shape and the desire to limit disturbed area and the environmental impacts of multiple small ponds on site area disturbance.

3. Yes. The design of the pond was based on TCEQ design criteria and endorsed by the City during the 2006 State Hearing process in an effort to limit construction impacts. Subdivision of the site did not factor into the shape or location of the Treated Effluent Holding Pond.

4. Yes. Constructing the Treated Effluent Holding Pond with cuts exceeding 4 feet allows for a minimized project footprint. The pond was specifically sited upgradient of the adjacent drainage ways to minimize disturbance to those areas. The smaller footprint of the improvements allows for less impervious cover in the form of access and perimeter roads that must be constructed for maintenance of the pond. Additionally, fewer trees will be removed and the disturbed area of the project can be limited by constructing a deeper pond with a smaller surface area.

5. Not applicable. The site does not include any improvements within a Critical Water Quality Zone or Water Quality Transition Zone.

7500 Rialto., Bldg.1, Suite 240, Austin, TX 78735
Phone: 512-899-0601 Fax: 512-899-0655
Firm Registration Number F-786

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ENVIRONMENTAL BOARD MOTION 040710 3a

Date: April 7, 2010

Subject: Lazy Nine MUD treated effluent holding pond SP-2010-0034D

Motioned By: Jon Beall Seconded By: Mary Ann Neely

RECOMMENDATION

The Environmental Board recommends approval with conditions for the Lazy Nine MUD treated effluent holding pond SP-2010-0034D.

BOARD CONDITIONS:

1. The applicant will implement a program to restore native grasses and other native plants in conjunction with the University of Texas Wild Flower Center.
2. The applicant will participate in the Ecological Laboratory program with the State of Texas by allowing access to their property for research.

RATIONALE:

While the Findings of Fact have been met, we ask the applicant to enhance this 200 acres of tract for other uses in exchange for this variance.

Vote 7-0-0-0

For: Ahart, Anderson, Beall, Gary, Maxwell, Moncada and Neely.

Against: None

Abstain: None

Absent: None

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10.	**Rezoning:**	**C14-2010-0026 - Hoskins 10 Rezone**
	Location:	414 Thompson Lane, Carson Creek Watershed
	Owner/Applicant:	Fred Hoskins
	Agent:	Jim Bennett Consulting (Jim Bennett)
	Request:	CS-CO to CS-CO to change a condition of zoning
	Staff Rec.:	**Not Recommended.**
	Staff:	Wendy Rhoades, 974-7719, wendy.rhoades@ci.austin.tx.us Planning and Development Review Department

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The motion to approve CS-CO district zoning with a 2,000 daily vehicle trip limit and removing the following uses from the prohibited use list: equipment repair services, equipment sales, kennels, laundry services, and transportation terminal; was approved by Commissioner Gregory Bourgeois' motion, Commissioner Patricia Seeger second the motion on a vote of 7-0.

11.	**Zoning and Rezoning:**	**C14-2010-0037 - Greenshores Annexation Zoning**
	Location:	Greenshores Subdivision, Lake Austin Watershed
	Agent:	City of Austin (Clark Patterson)
	Request:	I-SF-1, I-LA, SF-3 & LA to SF-1, RR & LA
	Staff Rec.:	**Recommended**
	Staff:	Clark Patterson, 974-7691, clark.patterson@ci.austin.tx.us Planning and Development Review Department

The motion to postpone to May 4, 2010 by the request of staff; was approved by Commissioner Sandra Baldridge's motion, Commissioner Donna Tiemann second the motion on a vote of 7-0.

12.	**Site Plan - Environmental Variance:**	**SP-2010-0034D - Lazy Nine MUD Treated Effluent Holding Pond**
	Location:	16301 - 16449 Block of W SH 71, Lake Travis Watershed
	Owner/Applicant:	Sweetwater Austin Properties, LLC (William T. Gunn III)
	Agent:	Malone/Wheeler, Inc (Richard Miller)
	Request:	Variance request from LDC 25-8-341 to allow cut up to a maximum of 25 feet.
	Staff Rec.:	**RECOMMENDED**
	Staff:	Jim Dymkowski, 974-2707, james.dymkowski@ci.austin.tx.us Sarah Graham, 974-2826, Sarah.Graham@ci.austin.tx.us Planning and Development Review Department

The motion to approve staff's recommendation for a variance from 25-8-341 with two conditions added: 1). The applicant will implement a landscape restoration program with a qualified entinty such as a university, non-profit organization or for a non-profit company specializing in native grass restoration in Texas. 2). The applicant will file a minor amendment to the affluent disposal permit, that's in place now, to provide for access by the ecological laboratory program with the State of Texas, for allowing access to the property for research; was approved on the consent agenda by Commissioner Sandra Baldridge's motion, Commissioner Donna Tiemann second the motion on a vote of 7-0.

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Lazy Nine MUD 1A Treated Effluent Holding Pond
SP-2011-0282D
Driving Directions

Beginning at the Y in Oak Hill, also known as the intersection of SH 71 and RR 620

Go west on SH 71 approximately 3.7 miles.
16801 1/2 W SH 71 will be on the south side of the road just east of the intersection of SH 71 and Serene Hills.

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PERMIT NO. WQ0014629001

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

This is a renewal of Permit No. WQ0014629001 issued October 20, 2009.

PERMIT TO DISCHARGE WASTES
under provisions of Chapter 26
of the Texas Water Code

Lazy Nine Municipal Utility District No. 1A and WS-COS Development, LLC

whose mailing address is

c/o Willatt & Flickinger
2001 North Lamar Boulevard
Austin, Texas 78705

Nature of Business Producing Waste: Domestic wastewater treatment operation, SIC Code 4952.

General Description and Location of Waste Disposal System:

Description: The Lazy Nine MUD No. 1A Wastewater Treatment Facility consists of an activated sludge process plant using the single stage nitrification mode in all phases. Treatment units include bar screen, aeration basin, final clarifier, aerobic sludge digester, and a chlorine contact chamber. The facility includes one storage pond with a total surface area of 3.5 acres and total capacity of 64.5 acre-feet for storage of treated effluent prior to irrigation in the interim phase. The facility includes two storage ponds with a total surface area of 5 acres and total capacity of 90.3 acre-feet for storage of treated effluent prior to irrigation in the final phase. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.18 million gallons per day (MGD) via surface irrigation of 73.3 acres of non-public access rangeland in the Interim Phase, and 0.49 MGD via surface irrigation of 199.5 acres of non-public access rangeland in the Final Phase. Application rates to the irrigated land shall not exceed 2.75 acre-feet per year per acre irrigated in the Interim Phase and in the Final Phase. The irrigated crops include native grass, junipers, hardwood, common bermuda or other managed cover grasses.

Location: The wastewater treatment facility and disposal site are located approximately 6.2 miles west of the Village of Bee Cave near State Highway 71 , in Travis County, Texas 78669. (See Attachment A and C)

Drainage Area: The wastewater treatment facility is located in the drainage basin of Bee Creek in Segment No. 1404 of the Colorado River Basin and the treated effluent disposal site is located in the drainage basin of Little Barton Creek in Segment No. 1430 of the Colorado River Basin. No discharge of pollutants into water in the State is authorized by this permit.

This permit and the authorization contained herein shall expire at midnight on **September 1, 2015.**

ISSUED DATE: October 18, 2011

For the Commission

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EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Conditions of the Permit: No discharge of pollutants into water in the State is authorized.

A. Effluent Limitations

Character: Treated Domestic Sewage Effluent

Volume: Daily Average Flow – 0.18 MGD from the treatment system (Interim Phase)
Daily Average Flow – 0.49 MGD from the treatment system (Final Phase)

Quality: The following effluent limitations shall be required:

Parameter	Effluent Concentrations (Not to Exceed) Daily Average mg/l	7-Day Average mg/l	Daily Maximum mg/	Single Grab mg/l
Biochemical Oxygen Demand (5-day)	10	N/A	N/A	35
Total Suspended Solids	15	N/A	N/A	60

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.

The effluent shall be chlorinated in a chlorine contact chamber to a residual of 1.0 mg/l with a minimum detention time of 20 minutes. If the effluent is to be transferred to a holding pond or tank, re-chlorination prior to the effluent being delivered into the irrigation system will be required. A trace chlorine residual shall be maintained in the effluent at the point of irrigation application.

B. Monitoring Requirements:

Parameter	Monitoring Frequency	Sample Type
Flow	Five/week	Instantaneous
Biochemical Oxygen Demand (5-day)	One/week	Grab
Total Suspended Solids	One/week	Grab
pH	One/month	Grab
Chlorine Residual	Five/week	Grab

The monitoring shall be done after the final treatment unit and prior to storage of the treated effluent. If the effluent is land applied directly from the treatment system, monitoring shall be done after the final treatment unit and prior to land application. These records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Commission for at least three years.

STANDARD PERMIT CONDITIONS

This permit is granted in accordance with the Texas Water Code and the rules and other Orders of the Commission and the laws of the State of Texas.

DEFINITIONS

All definitions in Section 26.001 of the Texas Water Code and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

   a. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

   b. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with 1 million gallons per day or greater permitted flow.

   c. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.

2. Concentration Measurements

   a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.

      i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

      ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.

   b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.

   c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.

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3. Sample Type

   a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

   b. Grab sample - an individual sample collected in less than 15 minutes.

4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.

5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids which have not been classified as hazardous waste separated from wastewater by unit processes.

6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING REQUIREMENTS

1. Monitoring Requirements

   Monitoring results shall be collected at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling in accordance with 30 TAC §§ 319.4 - 319.12.

   As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record or other document submitted or required to be maintained under this permit, including monitoring reports, records or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

   a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

   b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.

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3. Records of Results

   a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

   b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, and records of all data used to complete the application for this permit shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, or application. This period shall be extended at the request of the Executive Director.

   c. Records of monitoring activities shall include the following:

      i. date, time and place of sample or measurement;
      ii. identity of individual who collected the sample or made the measurement.
      iii. date and time of analysis;
      iv. identity of the individual and laboratory who performed the analysis;
      v. the technique or method of analysis; and
      vi. the results of the analysis or measurement and quality assurance/quality control records.

      The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

4. Additional Monitoring by Permittee

   If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in determining compliance with permit requirements.

5. Calibration of Instruments

   All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

   Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

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7. Noncompliance Notification

   a. In accordance with 30 TAC § 305.125(9), any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

   b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

      i. Unauthorized discharges as defined in Permit Condition 2(g).

      ii. Any unanticipated bypass which exceeds any effluent limitation in the permit.

   c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.

   d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible.

8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

   All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

      i. One hundred micrograms per liter (100 µg/L);

      ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

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iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or

iv. The level established by the TCEQ.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. Five hundred micrograms per liter (500 µg/L);
ii. One milligram per liter (1 mg/L) for antimony;
iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

PERMIT CONDITIONS

1. General

a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.

b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:

i. Violation of any terms or conditions of this permit;
ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

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b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.

e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and Texas Water Code Section 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Special Provisions section of this permit.

h. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties).

3. Inspections and Entry

a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 361.

b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in

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charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

4. Permit Amendment and/or Renewal

   a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:

      i. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;

      ii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

   b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.

   c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.

   d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.

   e. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

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5. Permit Transfer

   a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.

   b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

   This permit does not authorize any activity of hazardous waste storage, processing, or disposal which requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Property Rights

   A permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit Enforceability

   The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

9. Relationship to Permit Application

   The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

10. Notice of Bankruptcy.

   a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:

      i. the permittee;
      ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
      iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.

   b. This notification must indicate:

      i. the name of the permittee;
      ii. the permit number(s);
      iii. the bankruptcy court in which the petition for bankruptcy was filed; and
      iv. the date of filing of the petition.

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OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.

2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.

3. Domestic wastewater treatment facilities shall comply with the following provisions:

   a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.

   b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.

4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.

5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under Texas Water Code § 7.302(b)(6).

7. Documentation

   For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information specified as not confidential in 30 TAC § 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim

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must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities which generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

   a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90 percent of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

      If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 149) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

   b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

   c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

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9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.

10. Facilities which generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:

   a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.

   b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.

   c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Environmental Cleanup Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

   d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.

   e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

   f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:

      i. Volume of waste and date(s) generated from treatment process;
      ii. Volume of waste disposed of on-site or shipped off-site;
      iii. Date(s) of disposal;
      iv. Identity of hauler or transporter;
      v. Location of disposal site; and
      vi. Method of final disposal.

   The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of

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the TCEQ for at least five years.

11. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Texas Health and Safety Code.

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SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site or co-disposal landfill. **The disposal of sludge by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized by the TCEQ. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.**

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.

2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.

3. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

B. Testing Requirements

1. Sewage sludge shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method, which receives the prior approval of the TCEQ for the contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division and the Regional Director (MC Region 11) within 7 days after failing the TCLP Test.

   The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to:

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Director, Permitting and Remediation Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 11) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

Pollutant	Ceiling Concentration (Milligrams per kilogram)*
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. Below are the additional requirements necessary to meet the definition of a Class A sludge.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC Section 312.82(a)(2)(A) for specific information.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

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The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC Section 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC Section 312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of shall be treated in one of the processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall be treated in a process that has been approved by the U.S. Environmental Protection Agency as being equivalent to those in Alternative 5.

b. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

Alternative 1 -

i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.

ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

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ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;

iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;

iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and

v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;

iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;

iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and

v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition, the following site restrictions must be met if Class B sludge is land applied:

i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.

iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.

iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.

vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.

vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

ix. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC Section 312.44.

4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives 1 through 10 for Vector Attraction Reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

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Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 9 -

i. Sewage sludge shall be injected below the surface of the land.

ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

iii. When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10-

i. Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
ii. When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test	- once during the term of this permit
PCBs	- once during the term of this permit

All metal constituents and fecal coliform or Salmonella sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

Amount of sewage sludge (*) metric tons per 365-day period	Monitoring Frequency
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(*) *The amount of bulk sewage sludge applied to the land (dry weight basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

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SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

For those permittees meeting Class A or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

A. Pollutant Limits

Table 2

Pollutant	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

Pollutant	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

*Dry weight basis

B. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A or Class B pathogen reduction requirements as defined above in Section I.B.3.

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C. Management Practices

1. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.

2. Bulk sewage sludge not meeting Class A requirements shall be land applied in a manner which complies with the Management Requirements in accordance with 30 TAC Section 312.44.

3. Bulk sewage sludge shall be applied at or below the agronomic rate of the cover crop.

4. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:

   a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.

   b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instruction on the label or information sheet.

   c. The annual whole sludge application rate for the sewage sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

D. Notification Requirements

1. If bulk sewage sludge is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:

   a. The location, by street address, and specific latitude and longitude, of each land application site.

   b. The approximate time period bulk sewage sludge will be applied to the site.

   c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.

2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

E. Record keeping Requirements

The sludge documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a

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period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.

2. A description of how the pathogen reduction requirements are met (including site restrictions for Class B sludges, if applicable).

3. A description of how the vector attraction reduction requirements are met.

4. A description of how the management practices listed above in Section II.C are being met.

5. The following certification statement:

   "I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC Section 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC Section 312.83(b) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained.

   The person who applies bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

   a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge treatment activities.

   b. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.

   c. The number of acres in each site on which bulk sludge is applied.

   d. The date and time sludge is applied to each site.

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e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.

f. The total amount of sludge applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

F. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30 of each year the following information:

1. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
2. The frequency of monitoring listed in Section I.C. which applies to the permittee.
3. Toxicity Characteristic Leaching Procedure (TCLP) results.
4. Identity of hauler(s) and TCEQ transporter number.
5. PCB concentration in sludge in mg/kg.
6. Date(s) of disposal.
7. Owner of disposal site(s).
8. Texas Commission on Environmental Quality registration number, if applicable.
9. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
10. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
11. Level of pathogen reduction achieved (Class A or Class B).
12. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met.
13. Vector attraction reduction alternative used as listed in Section I.B.4.
14. Annual sludge production in dry tons/year.
15. Amount of sludge land applied in dry tons/year.

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16. The certification statement listed in either 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.

17. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.

    a. The location, by street address, and specific latitude and longitude.

    b. The number of acres in each site on which bulk sewage sludge is applied.

    c. The date and time bulk sewage sludge is applied to each site.

    d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.

    e. The amount of sewage sludge (i.e., dry tons) applied to each site.

    The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

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SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL

A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.

B. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a Municipal Solid Waste Landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.

C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

D. Sewage sludge shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division and the Regional Director (MC Region 11) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Remediation Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 11) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

E. Sewage sludge shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.

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F. Record keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.

2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.

2. Annual sludge production in dry tons/year.

3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.

4. Amount of sludge transported interstate in dry tons/year.

5. A certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.

6. Identity of hauler(s) and transporter registration number.

7. Owner of disposal site(s).

8. Location of disposal site(s).

9. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

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SPECIAL PROVISIONS:

1. This permit is granted subject to the policy of the Commission to encourage the development of area wide waste collection, treatment and disposal systems. The Commission reserves the right to amend this permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

2. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

   This Category C facility must be operated by a chief operator or an operator holding a Category C license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift which does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

3. The permittee shall maintain and operate the treatment facility in order to achieve optimum efficiency of treatment capability. This shall include required monitoring of effluent flow and quality as well as appropriate grounds and building maintenance.

4. Prior to construction of the Final Phase wastewater treatment facilities, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) of the Water Quality Division, a summary transmittal letter according to the requirements in 30 TAC Section 217.6(c). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications and a final engineering design report which comply with the requirements of 30 TAC Chapter 217, Design Criteria for Wastewater Treatment Systems. The permittee shall clearly show how the treatment system will meet the final permitted effluent limitations required on Page 2 of the permit.

5. The permittee shall comply with the requirements of 30 TAC Section 309.13 (a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC Section 309.13(e).

6. The permittee shall submit a simplified block diagram of the cross-section of the synthetic lined wastewater storage pond(s) to show that an underdrain leak detection system will be installed as required by 30 TAC 217.203 (d)(4)(A-D). The block diagram shall be submitted with the summary transmittal letter required under Other Requirement Item 4 above.

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7. Reporting requirements according to 30 TAC Sections 319.1-319.11 and any additional effluent reporting requirements contained in this permit are suspended from the effective date of the permit until plant startup or discharge, whichever occurs first, from the facility described by this permit. The permittee shall provide written notice to the TCEQ Regional Office (MC Region 11) and the Applications Review and Processing Team (MC 148) of the Water Quality Division at least forty-five (45) days prior to plant startup or anticipated discharge, whichever occurs first and prior to completion of each additional phase.

8. The permittee is authorized to haul sludge from the wastewater treatment facility, by a licensed hauler, to the City of Austin Walnut Creek Wastewater Treatment Facility, TPDES Permit No. WQ0010543011, or the San Antonio Water System Dos Rios Wastewater Treatment Facility, TPDES Permit No. WQ0010137033 to be digested, blended, dewatered and then disposed of with the sludge from the plant accepting the sludge.

   The permittee shall keep records of all sludge removed from the wastewater treatment plant site and these records shall include the following information:
   a. The volume of sludge hauled;
   b. The date(s) that sludge was hauled;
   c. The identity of haulers; and
   d. The permittee, TCEQ permit number, and location of the wastewater treatment plant to which the sludge is hauled.

   These records shall be maintained on a monthly basis and shall be reported to the TCEQ Regional Office (MC Region 11) and the TCEQ Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

9. Holding ponds shall conform to the Texas Commission on Environmental Quality "Design Criteria for Sewerage Systems" requirements for stabilization ponds with regard to construction and levee design, and a minimum of 2 feet of freeboard shall be maintained.

10. Permanent transmission lines shall be installed from the holding pond to each tract of land to be irrigated utilizing effluent from that pond.

11. The holding pond facility and disposal area are located on the Edwards Aquifer Contributing Zone, as mapped by the TCEQ, and is subject to 30 TAC Chapter 213, Subchapter B.

12. The irrigated crops include native grass, junipers, hardwood, common bermuda or other managed cover grasses. Application rates to the irrigated land shall not exceed 2.75 acre-feet per year per acre irrigated in the Interim Phase and 2.75 acre-feet per year per acre irrigated in the Final Phase. The permittee is responsible for providing equipment to determine application rates and maintaining accurate records of the volume of effluent applied. These records shall be made available for review by the Texas Commission on Environmental Quality and shall be maintained for at least three years.

13. Irrigation practices shall be designed and managed so as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. Crops and other ground cover shall be established and well maintained in the irrigation area throughout the year for effluent and nutrient uptake by the crop and to prevent pathways for effluent surfacing. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.

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14. Effluent shall not be applied for irrigation during rainfall events or when the ground is frozen or saturated.

15. The permittee shall erect adequate signs stating that the irrigation water is from a non-potable water supply for any area where treated effluent is stored or where there exist hose bibs or faucets. Signs shall consist of a red slash superimposed over the international symbol for drinking water accompanied by the message "DO NOT DRINK THE WATER" in both English and Spanish. All piping transporting the effluent shall be clearly marked with these same signs.

16. Spray fixtures for the irrigation system shall be of such design that they cannot be operated by unauthorized personnel.

17. Irrigation with effluent shall be accomplished only when the area specified is not in use.

18. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.

19. The permittee shall provide facilities for the protection of its wastewater treatment facilities from a 100-year flood.

20. The water well location marked in the permittee's irrigation tract shown on the USGS Shingle Hills Quadrangle Map submitted by the permittee (on file) is the location of two wells. These two wells shall have either (i) a 150-foot buffer from wastewater application or (ii) a plugging and abandoning report(s) as required by the water well drillers 16 TAC Chapter 76 rules.

The following provisions are in accordance with the changes required by the Commission Order issued on September 19, 2007 regarding TCEQ Docket No. 2006-0688-MWD; SOAH Docket No. 582-06-2596.

21. The permittee shall submit a Final Irrigation Management Plan to the TCEQ Water Quality Assessment Team (MC-150) for approval and/or modification at least 120 days before any wastewater is applied to the permitted area. The Final Irrigation Management Plan shall describe the type of irrigation system, the layout or distribution of fixed head side roll, pivot, or traveling gun and main lines of the irrigation system, the locations and coverage of each spray nozzle, wastewater dosing schedule, and a proposal to prevent freezing, rupture or averting mechanical damage to the irrigation lines and confirm the cover vegetation that will remove nutrients throughout the year. The plan shall include a weekly schedule of monitoring and inspecting the physical condition of the irrigation fields for any problems associated with surface runoff, erosion, and stressed or damaged vegetation, the results of which shall be recorded in a site log book and retained on the facility property for inspection. The plan shall indicate that corrective measures will be implemented immediately upon identification of problems related to surface erosion, stressed or damaged vegetation, or problems in maintaining an annual vegetative cover system that will use wastewater nutrients throughout the year.

22. The Applicants will confirm, through their engineer, and under the seal of the engineer, that the location of the proposed wastewater treatment facility is outside the 100-year flood plain

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shown on the Federal Emergency Management Agency, FIRM Flood Insurance Rate Map, Travis County, Texas, and Incorporated Areas, Panel 385 of 745, Map No. 48453C0385G, REVISED PRELIMINARY FEB 24, 2006.

23. Effluent shall not be applied on the following areas:

a) A 210-foot buffer between wastewater application and the centerline of Little Barton Creek or the width of the 100-year floodplain, whichever is greater;

b) A 50-foot buffer between wastewater application and the centerline of the two intermittent streams and valley area or the width of the 100-year flood plain, whichever is greater, except that, around the area identified on Exhibit "B" attached hereto as wetland just south of the ranch building, the buffer zone shall be 150 feet from the center of the wetland area.

c) An outcrop of bedrock/broken rock approximately 1.9 acres in size, located at the northwest corner of the permitted tract shall be excluded from effluent application.

24. Subsequent to the initiation of land application and annually thereafter, the permittee shall obtain representative soil samples from the A, B, and C horizons of the same genetic type as far as a total depth of 30 inches. Composite sampling techniques shall be used. Each composite sample shall represent no more than 80 acres with no less than 15 subsamples representing each composite sample. Subsamples shall then be composited by genetic horizon and soil type for analysis and reporting. The permittee shall sample and analyze soils between December and February of each year. Samples shall be taken within the same 45-day time-frame each year.

The permittee shall provide annual soil analyses of the land application area for pH [2:1 (v/v) water/soil mixture], conductivity [2:1 (v/v) water/soil mixture]; total kjeldahl nitrogen (TKN), nitrate-nitrogen, and plant-available potassium; calcium; magnesium; sulfur; and phosphorus. The plant nutrient parameters shall be analyzed on a plant available or extractable basis. Phosphorus shall be analyzed according to the Mehlich III procedure and potassium, calcium, magnesium, sodium, and sulfur may also be analyzed in the Mehlich III extract. Plant-available phosphorus, potassium, calcium, magnesium, sodium and sulfur shall be reported on a dry weight basis in mg/kg; conductivity, in mmho/cm; and pH, in standard units. Kjeldahl procedures that use methods that rely on mercury as a catalyst are not acceptable.

The permittee shall submit the results of the annual soil sample analyses with copies of the laboratory reports to the TCEQ Water Quality Assessment Team of the Water Quality Division (MC 150), TCEQ Regional Office (MC Region 11), and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, no later than the end of July of each sampling year. If wastewater is not applied in a particular year, the permittee shall notify the same TCEQ offices and indicate that wastewater has not been applied on the approved land disposal site during that year.

25. Vegetation shall he established and well maintained throughout all months of the year. The permittee shall plant a mix of tall and mid grasses, primarily but not wholly consisting of grasses and forbs that are native to the area, including by way of example, Big bluestem, switch grass, Indian grass, little bluestem, side oats gamma, Green Sprangletop, Texas winter grass and eastern gamma grass in the applicable areas to maintain an annual

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vegetative cover. Grasses will be cut at least annually. Grass cuttings shall be removed from the application areas. Any areas that will receive wastewater and contain surface rock fragments greater than 50% shall be irrigated in a manner that will prevent surface runoff from the permitted area.

26. The permittee shall submit a Wastewater Treatment Plant (WWTP) Emergency Plan with the "Plans and Specifications for the WWTP" with the summary transmittal letter required under Other Requirement Item 4 above. The Emergency Plan shall address how the facility will meet the 30TAC 309 Subchapter B 309.12, Site Selection to Protect Groundwater or Surface Water, (3) separation distance from the facility to points of discharge to surface water. The Applicants will provide a spill containment system for the wastewater treatment plant that will contain at least one day's volume of wastewater flows (490,000 gallons), spill containment devices for the lift stations that are in the Bee Creek Watershed, a backup power generator integrated into the electrical control system of the wastewater treatment plant, and backup power generators integrated into the electrical control systems of the lift stations in the Bee Creek Watershed, and will equip the electric control systems of the wastewater treatment plant and the lift stations in the Bee Creek Watershed with autodial equipment and with visual and auditory alarm systems that will activate in the event of a power outage.

Lazy Nine Municipal Utility District No. 1A and WS-COS Development, LLC
TCEQ Permit No. WQ0014629001

ATTACHMENT A

SITE DRAWING
WWTP & AREA SERVED

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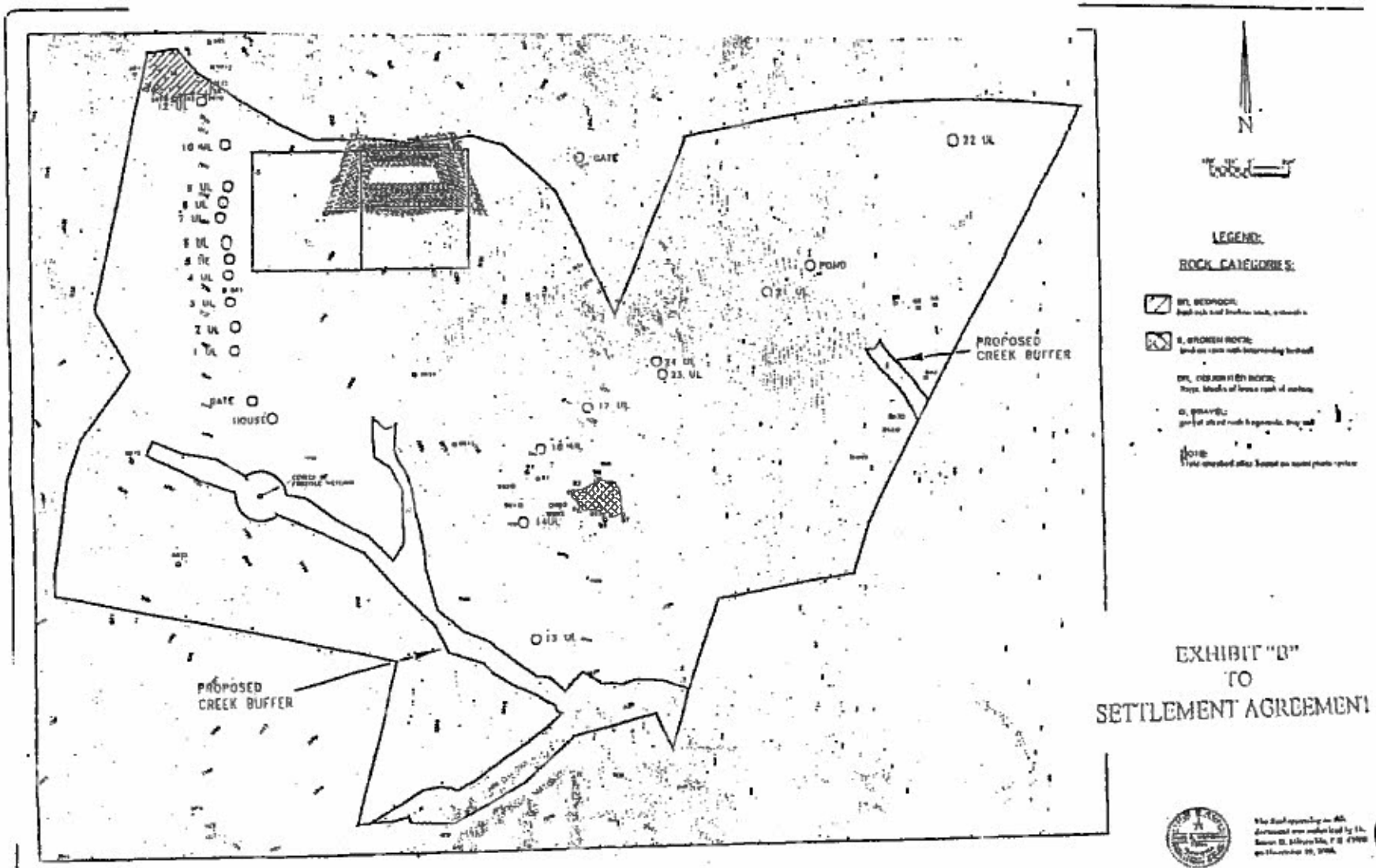
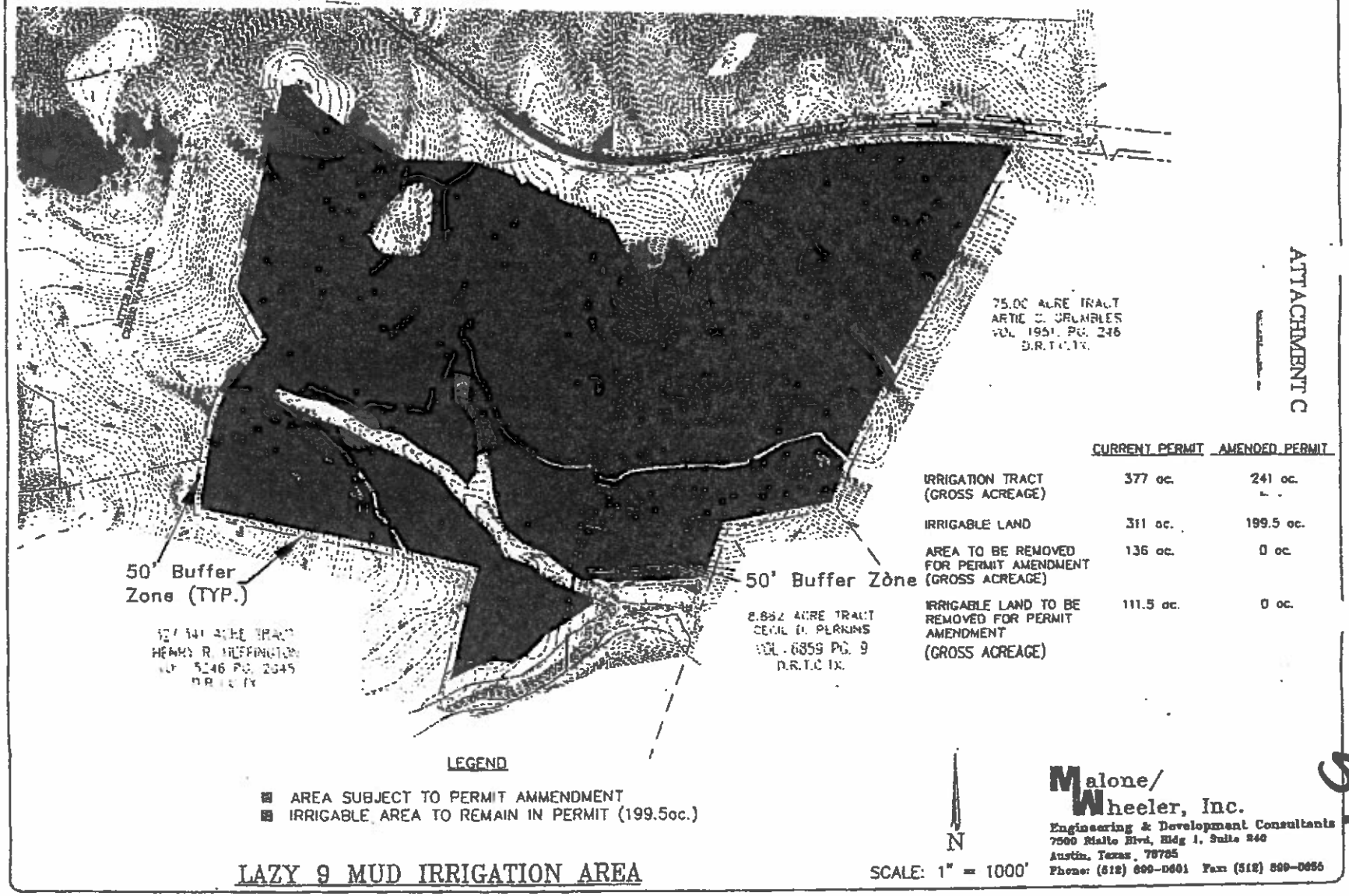

N
LEGEND:
ROCK CATEGORIES:
PROPOSED CREEK BUFFER
PROPOSED CREEK BUFFER
GATE
HOUSE
POND
EXHIBIT "B"
TO
SETTLEMENT AGREEMENT
LAZY NINE M.U.D. EFFLUENT DISPOSAL AREA
ROCKY AREA MAP
JAMES WIERTSCHIN & ASSOCIATES, P
ENVIRONMENTAL ENGINEERING



ATTACHMENT C

	CURRENT PERMIT	AMENDED PERMIT
IRRIGATION TRACT (GROSS ACREAGE)	377 ac.	241 ac.
IRRIGABLE LAND	311 ac.	199.5 ac.
AREA TO BE REMOVED FOR PERMIT AMENDMENT (GROSS ACREAGE)	136 ac.	0 ac.
IRRIGABLE LAND TO BE REMOVED FOR PERMIT AMENDMENT (GROSS ACREAGE)	111.5 ac.	0 ac.

LAZY 9 MUD IRRIGATION AREA

Malone/Wheeler, Inc.
Engineering & Development Consultants
7500 Rialto Blvd, Bldg 1, Suite 240
Austin, Texas, 78735
Phone: (512) 899-0601 Fax: (512) 899-0655

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SOAH DOCKET NO. 582-06-2596
TCEQ DOCKET NO. 2006-0688-MWD

APPLICATION OF LAZY NINE	§	**BEFORE THE STATE OFFICE**
MUNICIPAL UTILITY DISTRICT AND	§	**OF**
FOREST CITY SWEETWATER	§	**ADMINISTRATIVE HEARINGS**
LIMITED PARTNERSHIP FOR	§	
PROPOSED PERMIT WQ0014629001	§	

SETTLEMENT AGREEMENT

This Agreement is by and between Lazy Nine Municipal Utility District, Forest City Sweetwater Limited Partnership, hereinafter called "Applicants," the City of Austin, Texas hereinafter called the "City," and the Lower Colorado River Authority, hereafter called "LCRA."

RECITALS

A. Applicants applied to the Texas Commission on Environmental Quality ("TCEQ") for a Texas land application permit. The TCEQ issued a draft permit, with cover letter from L'Oreal W. Stepney, Director, Water Quality Division, addressed to Mike Willatt, a copy of which letter and draft permit are attached hereto as Exhibit "A."

B. In the above-captioned Cause, the City, the LCRA and the Protestants are contesting the terms of the draft permit.

C. The parties have now agreed to issuance of the proposed draft permit, with certain changes more particularly set forth herein.

AGREEMENT

NOW THEREFORE, for and in consideration of the premises and the covenants and promises contained herein, the parties agree as follows:

ARTICLE I
TERMS OF DRAFT PERMIT

The parties agree to issuance of the draft permit, with certain changes as follows:

1. Special Provision 16. The first sentence of Special Provision 16 shall be revised to read as follows: "The permittee shall submit a **Final Irrigation Management Plan** to the TCEQ Water Quality Assessment Team (MC-150) for approval and/or modification at least 120 days before any wastewater is applied to the permitted area."

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2. Special Provision 17. Special Provision 17 will be deleted from the permit.

3. Special Provision 18. The last sentence of Special Provision 18 shall be revised to read as follows:

> The Applicants will provide a spill containment system for the wastewater treatment plant that will contain at least one day's volume of wastewater flows (700,000 gallons), spill containment devices for the lift stations that are in the Bee Creek Watershed, a backup power generator integrated into the electrical control system of the wastewater treatment plant, and backup power generators integrated into the electrical control systems of the lift stations in the Bee Creek Watershed, and will equip the electric control systems of the wastewater treatment plant and the lift stations in the Bee Creek Watershed with autodial equipment and with visual and auditory alarm systems that will activate in the event of a power outage.

4. Special Provision 20. Special Provision 20 shall be revised to read as follows:

> Vegetation shall be established and well maintained throughout all months of the year. The permittee shall plant a mix of tall and mid grasses, primarily but not wholly consisting of grasses and forbs that are native to the area, including by way of example, Big bluestem, switch grass, Indian grass, little bluestem, side oats gamma, Green Sprangletop, Texas winter grass and eastern gamma grass in the applicable areas to maintain an annual vegetative cover. Grasses will be cut at least annually. Grass cuttings shall be removed from the application areas. Any areas that will receive wastewater and contain surface rock fragments greater than 50% shall be irrigated in a manner that will prevent surface runoff from the permitted area.

5. Special Provision 22. Effluent shall not be applied on the following areas:

(a) A 210-foot buffer between wastewater application and the centerline of Little Barton Creek or the width of the 100-year flood plain, whichever is greater;

(b) A 50-foot buffer between wastewater application and the centerline of the two intermittent streams and valley area or the width of the 100-year flood plain, whichever is greater, except that, around the area identified on Exhibit "B" attached hereto as wetland just south of the ranch building, the buffer zone shall be 150 feet from the center of the wetland area.

(c) An outcrop of bedrock/broken rock approximately 1.9 acres in size, located at the northwest corner of the permitted tract shall be excluded from effluent application.

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ARTICLE II
FLOOD PLAIN ASSURANCES

The Applicants will confirm, through their engineer, and under the seal of the engineer, that the location of the proposed wastewater treatment facility is outside the 100-year flood plain shown on the Federal Emergency Management Agency, FIRM Flood Insurance Rate Map, Travis County, Texas and Incorporated Areas, Panel 385 of 745, Map No. 48453CO385G, Map Revised PRELIMINARY FEB 24, 2006.

ARTICLE III
COMPLIANCE WITH PERMIT

The Applicants agree to comply with the terms of the Permit issued by the TCEQ in TCEQ DOCKET NO. 2006-0688-MWD.

ARTICLE IV
AGREED MOTION TO ALJ

The parties agree that they will file an agreed motion substantially in the form of that attached hereto as Exhibit "C" attached hereto.

Signed and agreed to on the dates shown below.

LAZY NINE MUNICIPAL UTILITY DISTRICT AND FOREST CITY SWEETWATER LIMITED PARTNERSHIP, BY AND THROUGH THEIR ATTORNEY, MIKE WILLATT

By: Mike Willatt
Mike Willatt

CITY OF AUSTIN, TEXAS, BY AND THROUGH ITS ATTORNEY, HOLLY NOELKE

By: Signed on her behalf
Holly Noelke
by Mike Willatt, as evidenced by the attached excerpt of an e-mail

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LOWER COLORADO RIVER AUTHORITY, BY AND THROUGH ITS ATTORNEY, VIC RAMIREZ

By: _____
Vic Ramirez

C4/62

Willatt & Flickinger

From: "Noelke, Holly" <Holly.Noelke@ci.austin.tx.us>
To: <mwillatt@wfaustin.com>; <Vic.Ramirez@lcra.org>; <stuarthenry@wildblue.net>
Cc: "Cotton, Mitzi" <Mitzi.Cotton@ci.austin.tx.us>; "Noelke, Holly" <Holly.Noelke@ci.austin.tx.us>
Sent: Friday, December 08, 2006 10:25 AM
Attach: settlement-agreement.pdf
Subject: FW: SETTLEMENT

Mr. Willatt,

Please tell the ALJ that you have my authorization to sign my name on the attached settlement agreement. I am using an out of office computer which is acting up and I am not able to transmit a signed version. I will be at the hearing on Monday morning and will respond to any questions at that time. In addition at that time we can discuss the admission of testimony and the need for examination of the city witnesses.
Thank you. I can be reached by cell phone today at 799-8899.
Holly Noelke

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

Mr. Mike Willatt
Willatt & Flickinger
2001 North Lamar Boulevard
Austin, Texas 78705

Re: Willatt & Flickinger, Permit No. WQ0014629001
(RN 104703166; CN 602731572 & 603001413)

Dear Mr. Willatt:

Enclosed is a copy of the above referenced permit for a wastewater treatment facility issued on behalf of the Executive Director pursuant to Chapter 26 of the Texas Water Code.

Self-reporting or Discharge Monitoring Forms and instructions will be forwarded to you from the Water Quality Management Information Systems Team so that you may comply with monitoring requirements. For existing facilities, revised forms will be forwarded if monitoring requirements have changed.

Enclosed is a "Notification of Completion of Wastewater Treatment Facilities" form. Use this form when the facility begins to operate or goes into a new phase. The form notifies the agency when the proposed facility is completed or when it is placed in operation. This notification complies with the special provision incorporated into the permit.

Should you have any questions, please contact Mr. Julian D. Centeno Jr. of the Texas Commission on Environmental Quality's Wastewater Permitting Section at (512) 239-4671 or if by correspondence, include MC 148 in the letterhead address below.

Sincerely,

J'Oreal W. Stepney, Director
Water Quality Division

LWS/JCms

Enclosures

ccs: TCEQ, Region 11
Mr. James Miertschin, P.E., Ph.D., James Miertschin & Associates, P.O. Box 162035, Austin, Texas 78716

EXHIBIT "A"
TO
SETTLEMENT AGREEMENT

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EXPLANATION OF 1015 PERMIT

The following explanation and list of COA facilities and permit types has been provided to Staff by Mr. Rajendra P. Bhattarai, P.E., DEE, Division Manager with the Environmental and Regulatory Services Division, Austin Water Utility, City of Austin:

A "10/15" permit for a wastewater treatment plant refers to the monthly average treated effluent quality of **10** milligrams per liter (mg/l) or parts per million of 5-day Biochemical Oxygen Demand (BOD_5) and **15** mg/l of Total Suspended Solids (TSS). This is known as the "advanced secondary" treatment in Texas. Nationwide a 30/30 permit is considered "secondary." However, in Texas we have more stringent "20/20" limits that are considered "secondary." The City's two large wastewater treatment plants – Walnut Creek and South Austin Regional – have "10/15/2" monthly average permits. The last number "2" refers to the Ammonia-Nitrogen (NH_3-N) concentration in the plants' treated effluent. In addition to the monthly average limits of "10/15/2," the City has voluntarily requested and received annual average limits of "5/5/2" in the permits for the two large plants. We have some smaller plants that have permit limits of "20/20" or "10/15" or "10/15/3" or "5/5/2/1." The 4th number "1" refers to the Total Phosphorus concentration in the effluent. See attached summary of Austin's wastewater treatment plant permits.

Perhaps the plant that should be compared with the Lazy Nine MUD plant is the Lost Creek Wastewater Treatment Plant. Both plants use their treated effluent for irrigation in the vicinity of Barton Creek. The Lost Creek Plant was not built by the City, but by a developer for the Lost Creek MUD. The City became the owner of the Lost Creek Plant recently, but the MUD is still the operator. The Texas Commission on Environmental Quality (TCEQ) has issued a "10/15" permit for the Lost Creek Plant.

City of Austin (CN600135198)

Austin Water Utility

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Wastewater Treatment Plants and Permits

1. Walnut Creek Wastewater Treatment Plant, TPDES Permit No. WQ0010543011, EPA ID No. TX0046981, RN101607901, 75 MGD (annual average), 10/15/2 (monthly average) and 5/5/2 (annual average) to the Colorado River

2. South Austin Regional Wastewater Treatment Plant, TPDES Permit No. WQ0010543012, EPA ID No. TX0071889, RN101607794, 75 MGD (annual average), 10/15/2 (monthly average) and 5/5/2 (annual average) to the Colorado River

3. Wild Horse Ranch Wastewater Treatment Plant, TPDES Permit No. WQ0010543013, EPA ID No. TX0124800, RN103014577, 0.75 MGD, 5/5/2/1 to a tributary of Gilleland Creek

4. Whisper Valley Wastewater Treatment Plant, TPDES permit No. WQ0010543014, EPA ID No. TX0129950, RN105331755, (inactive, plant not constructed yet); contemplated discharge of 3 MGD (annual average), 5/5/2/1 to Gilleland Creek

5. Garfield Wastewater Treatment Plant, TPDES Permit No. WQ0014036001, EPA ID No. TX0117200, RN101526952, (inactive, plant not constructed yet), contemplated discharge of 0.3 MGD 5/5/2/1 to Dry Creek

6. Harris Branch Wastewater Treatment Plant, TPDES Permit No. WQ0013318001, EPA ID No. TX0101532, RN102806635, 0.4 MGD, 5/5/2/1 to Harris Branch

7. Thoroughbred Farms Wastewater Treatment Plant, TPDES Permit No. WQ0014459001, EPA ID No. TX0067466, RN101265254, 0.065 MGD, 20/20 to Dry Creek

CH/do

8. Dessau Wastewater Treatment Plant, TPDES Permit No. WQ0012971001, EPA ID No. TX0097870, RN102077328, 0.5 MGD, 10/15/3 to a tributary of Harris Branch

9. Anderson Mill Wastewater Treatment Plant, TPDES Permit No. WQ0011459001, EPA ID No. TX0034207, RN101612737, 0.9 MGD, 7/15/3 to Lake Creek

10. Balcones Water Reclamation Plant, TCEQ Permit No. WQ0011363001, RN102095114, no discharge, irrigation of golf course, 0.292 MGD/10

11. Onion Creek Water Reclamation Plant, TCEQ Permit No. WQ0011467001, RN102078763, no discharge, irrigation of golf course, 0.345 MGD, 20/20

12. Lost Creek Water Reclamation Plant, TCEQ Permit No. WQ0011319001, RN100641653, no discharge, irrigation of golf course, 0.42 MGD, 10/15

13. Hornsby Bend Biosolids Management Plant, TCEQ Permit No. WQ0003823000, EPA ID No. TXL0050005, RN101607679, biosolids treatment plant, no discharge

Plants 1 through 9 are permitted to discharge to a stream. Plants 10 through 13 are not permitted to discharge to the waters of the state.

Permitted flows are expressed as monthly averages unless specified otherwise. Effluent quality is expressed as monthly average (unless otherwise specified) and written after the permitted average flow in the following order: 5-day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)/Total Suspended Solids (TSS)/Ammonia-Nitrogen (NH_3-N)/Total Phosphorus (TP), when applicable. For Balcones, Onion Creek, Lost Creek and Thoroughbred Farms, the effluent limit is on 5-Day Biochemical Oxygen Demand (BOD_5), and not on $CBOD_5$.

Raj Bhattarai, March. 30, 2010

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Slope and vegetation example in a portion of the effluent holding pond area looking south

West end of adjacent east/west tributary looking west

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Vegetative example of intermittent nature of these tributaries with prickly pear and dessert willow growing with wetland vegetation

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East end of adjacent east/west tributary looking west

North end of adjacent north/south tributary looking north

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South end of adjacent north/south tributary looking north

Malone/
Wheeler, Inc.

Engineering & Development Consultants

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MEMORANDUM

TO: Dr. Mary Gay Maxwell, Chair
City of Austin Environmental Board

FROM: Richard J. Wheeler, P. E.

SUBJECT: Lazy Nine MUD 1-A Treated Effluent Holding Pond
Variance request

DATE: March 18, 2010

During the course of discussion of the cut variance for the Lazy Nine MUD 1-A treated effluent holding pond (SP-2010-0034D), a question was posed related to the seeming discrepancy between the 3.5 acre surface area of the pond, as designed, and the 2.5 acre surface area contained in the General Description and Location of Waste Disposal System on the face of the TCEQ TLAP permit. Please be advised of the following in that regard:

1. The current design and construction plans for the treated effluent holding pond, which provides for a storage volume that is slightly in excess of 64.5 acre-feet and a water surface area, when the pond is full at maximum capacity of 3.5 acres was reviewed and approved by TCEQ in December 2008. (Copy of letter attached.)

2. The construction plans for the treated effluent holding pond approved by TCEQ are identical to those submitted to the City of Austin for the site development permit review and approval process.

3. This issue was reviewed and discussed with the Municipal Permits Team and Water Quality Assessment Section of the TCEQ Water Quality Division in some detail on March 11 and 16. Both groups acknowledged that the 3.5 acre surface area pond design was better than a 2.5 acre surface area pond design, if both have the same storage volume, because it allows for a higher volume of evapotranspiration to occur. Such evapotranspiration reduces the actual volume of effluent that needs to be disposed of via spray irrigation. TCEQ also acknowledged that effluent holding ponds are rarely filled to the permitted volume capacity such that the actual volume of treated effluent that creates a pond surface area of 2.5 acres or more would only occur very infrequently and will never occur during the interim phase daily flows of 180,000 gpd. This interim phase daily flow volume, with sixty (60) days of storage only utilizes 32

7500 Rialto., Bldg.1, Suite 240, Austin, TX 78735
Phone: 512-899-0601 Fax: 512-899-0655

CH 14

acre feet of the 64.5 acre feet of the permitted interim phase pond capacity and daily flow volume limits. Accordingly a surface area of 2.5 acre of effluent will never occur during the interim phase of the permit.

4. TCEQ wastewater permits are issued for a term of five (5) calendar years. The current Lazy Nine MUD 1-A permit expires on September 1, 2011. An application for permit renewal must be submitted no later than 180 days prior to permit expiration (TCEQ staff actually prefers to receive the renewal application 300 days or more prior to expiration due to the ongoing review backlog of new permit, amended permit and renewed permit applications.) In this case, the permit renewal application will be submitted in September of this year to allow for sufficient processing time. The permit renewal application will include a modification of the interim phase pond surface area from 2.5 acres to 3.5 acres to accurately reflect the approved construction plans and as-built condition.

5. It is important to note that TCEQ recognizes that discrepancies in facility sizing or siting routinely occur between the time the permit parameters are established, without the benefit of final designs and construction plans, and the preparation of those detailed documents. As long as those discrepancies do not materially affect the permit conditions relative to water quality, treatment volumes and buffer zones, the corresponding changes in the permit itself are handled via a minor amendment or at the permit renewal. A minor permit amendment application has the same time and data requirements as does an application for a new permit or permit renewal. TCEQ staff suggested that, if the pond surface area issue cannot wait until the normal permit renewal cycle to be amended, a minor permit amendment application could be submitted and processed. In that case, the minor amendment permit would most likely be approved and issued in October or November of this year; virtually at the same time that the permit renewal application is submitted. There is no scenario in which the completed interim phase pond would receive treated effluent in a volume sufficient to create a ponds surface area of 2.5 acres, much less 3.5 acres prior to permit renewal in 2011.

6. From a practical standpoint, construction of the treated effluent holding pond will not be completed prior to the first quarter of 2011. There are currently no connections to the Lazy Nine MUD 1-A wastewater treatment and disposal system. The interim phase effluent holding pond and irrigation will serve between 600 connections and 1,200 connections. Within the context of current and anticipated near term economic conditions this pond is easily expected to be sufficient for ten (10) to twenty (20) years and perhaps beyond. It may be sufficient for a longer period of time because Lazy Nine MUD 1-A will also utilize a TCEQ 210 Re-Use Permit that allows for the irrigation of landscaping and rights-of-way with treated wastewater effluent. There are approximately ten acres (10 ac) of right-of-way and landscape areas that will be available to be irrigated from the first day that the wastewater treatment plant produces treated effluent. This acreage can accommodate approximately seventy (70) connections to the wastewater system which may well be equivalent to the first twelve (12) to eighteen (18) months of home building within the MUD. Accordingly, the earliest that any treated effluent might actually be pumped to the treated effluent holding pond may be mid-year 2012 which is well after the permit renewal cycle of 2011. Further, based on the potential homebuilding

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schedule within the MUD, the surface area of the pond would not reach 2.5 acres, much less 3.5 acres before the year 2030 unless the MUD voluntarily and arbitrarily elects to allow the pond to fill before initiating the spray irrigation program; an unlikely scenario at best.

Simply put the effluent holding pond surface area description will be modified in the General Description of the permit well in advance of any treated effluent reaches a surface area of 2.5 acre in the pond.

7. TCEQ staff also reminded us that the permit holder is responsible for compliance with the permit conditions. As long as permit conditions, which are separate and apart from the General Description and Location of Waste Disposal System, are being met, the description of the waste disposal system components can be readily modified via permit renewal or minor amendment. This is particularly true for phased permits with multiple system components that will be constructed as flow demand and capacity dictate, such as Lazy Nine. In this case, the surface area description of the ponds can be easily changed by either process.

8. It is also important to note that the effluent holding pond has been designed to have two feet (2') of free board above the design capacity in accordance with TCEQ design standards. This free board provides a meaningful safety factor for the storage of treated effluent. For a 2.5 acre surface acre pond that safety volume is approximately 1,742,400 gallons or almost 10 days of additional storage. In the same vein, a 3.5 acre surface area pond has a free board safety volume of approximately 2,439,360 gallons or the equivalent of an additional 13.6 days of additional emergency storage.

9. Lastly, the 64.5 acre foot treated effluent holding pond will accommodate the equivalent of 375,000 gpd of wastewater production; more than double the interim phase permit condition for volume of 180,000 gpd. In essence, the current pond design is more than twice as large as is needed to store the interim phase flows contained in the permit. This situation will be noted and included in the permit renewal application that will be submitted late this year. Accordingly, the difference in the description of the surface area of pond effluent shown in the permit and the maximum design pond surface area is insignificant.

ENVIRONMENTAL CONSULTANTS

C4/16

Environmental Assessment in Accordance with the City of Austin Land Development Code for the Lazy Nine MUD State Highway 71 Effluent Storage Pond, Travis County, Texas

Prepared for

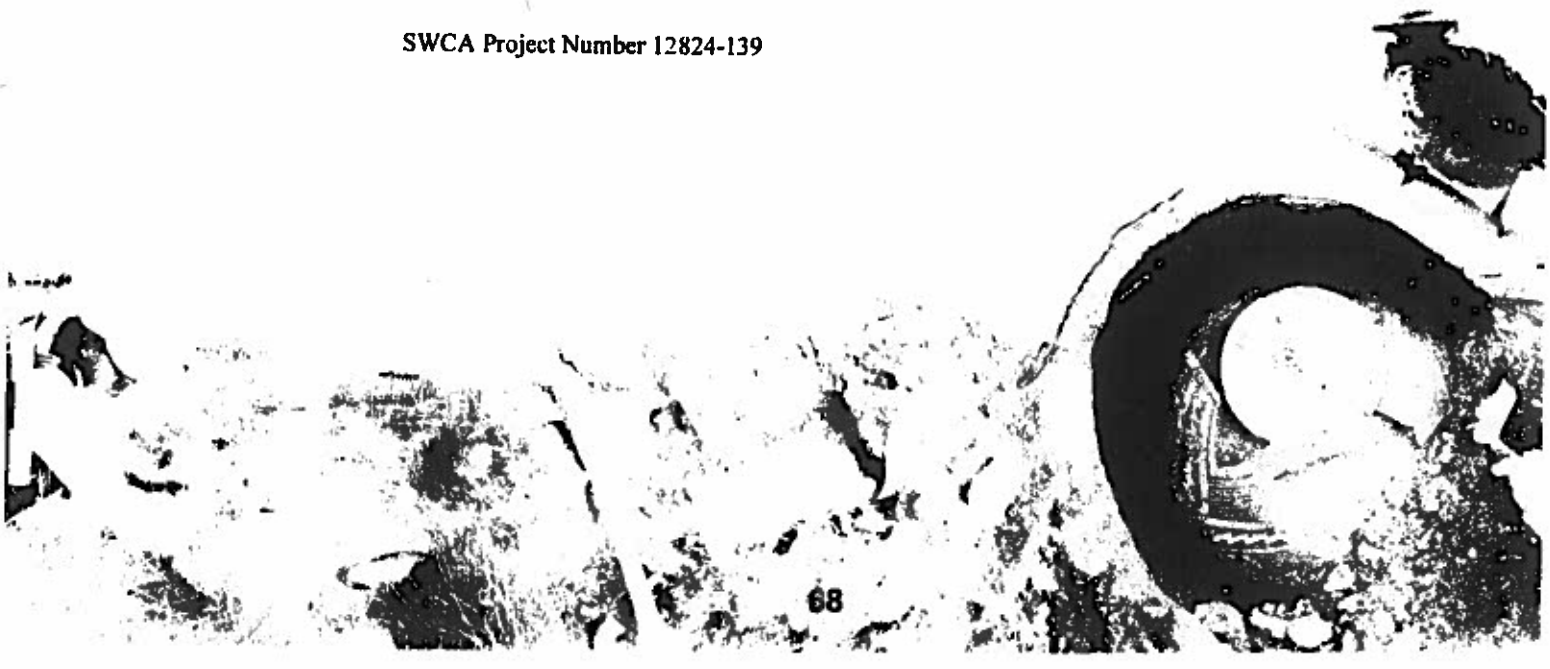
Malone/Wheeler, Inc.

Prepared by

SWCA Environmental Consultants

18 June 2007

SWCA Project Number 12824-139



C4/T

ENVIRONMENTAL ASSESSMENT IN ACCORDANCE WITH THE CITY OF AUSTIN LAND DEVELOPMENT CODE FOR THE LAZY NINE MUD STATE HIGHWAY 71 EFFLUENT STORAGE POND, TRAVIS COUNTY, TEXAS

Prepared for

MALONE/WHEELER, INC.
7500 Rialto Blvd.
Building 1, Suite 240
Austin, Texas 78735

Prepared by

SWCA ENVIRONMENTAL CONSULTANTS
4407 Monterey Oaks Boulevard
Building 1, Suite 110
Austin, Texas 78749

SWCA Project No. 12824-139

18 June 2007

CH/18

TABLE OF CONTENTS

LIST OF FIGURES

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1.0 PURPOSE/INTRODUCTION

The purpose of this environmental assessment ("EA") is to evaluate the impacts of a proposed effluent storage pond located in western Travis County, Texas (the "proposed project"), as required under the City of Austin ("COA") Land Development Code ("LDC") Section 25-8-121. This assessment follows COA guidelines for completing EAs as adopted by the COA on 29 December 2006. The code requires that critical environmental features ("CEFs") and endangered species habitat surveys be conducted for construction projects occurring within areas under COA jurisdiction.

The approximately 3.5-acre proposed effluent storage pond will be located on the south side of State Highway (SH) 71 between the City of Bee Cave and Bee Creek Road in western Travis County, Texas (Figure 1). The proposed project will be located on Redondo Peak which is located within the Little Barton Creek Watershed and lies south of the Colorado River outside of the recharge zone for the Barton Springs Segment of the Edwards Aquifer. In addition, the proposed project lies approximately 3,400 feet south of the nearest 100-year floodplain, as mapped by the Federal Emergency Management Agency (FEMA) (Figure 2). The proposed project will connect via a 770-foot extension to the proposed Lazy Nine MUD treated effluent force main, which is addressed under a separate cover.

This assessment is divided into five primary sections. The first provides a hydrogeologic report and is followed by a section that discusses the status of CEFs on the proposed project. Remaining sections include a vegetative report, a utilities report, and an endangered species assessment.

2.0 HYDROGEOLOGIC REPORT

The proposed project is located within the Little Barton Creek watershed, which flows to Lake Travis and the Colorado River, respectively. Topography of the proposed project is hilly. Elevations range from 1100 to 1150 feet above mean sea level ("msl"). Surface geology of the proposed project and surrounding area consists primarily of the Glen Rose Formation. The Glen Rose Formation is approximately 380 feet thick and consists of layers of limestone, marl, and dolomite that tend to form a stair-stepped topography due to varying permeability of the layers.[1] Redondo Peak is also formed primarily from the Glen Rose Formation, but is capped by an isolated remnant of the Edwards Formation. The Edwards Formation consists of layers of porous limestone and dolomite, with some beds containing abundant chert nodules.[2]

The proposed project area lies in the Brackett soil association, which is described as containing shallow, gravelly, calcareous, clayey soils, intermingled with shallow soils overlying interbedded limestone and marl.[3] One soil map unit occurs within the proposed project area: Brackett-Rock outcrop complex, 1 to 12 percent slopes ("BID"). These soils are shallow, occur on hilly uplands, and have calcareous clay loam surfaces. Depth to bedrock averages 6 to 20 inches. The surface layer is light brownish gray (10YR 6/2) gravelly clay loam about 6 inches deep.

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[1] Bureau of Economic Geology. 1983. Geologic Atlas of Texas, Austin Sheet. The University of Texas at Austin.
[2] Bureau of Economic Geology. 1981. Geologic Atlas of Texas, Llano Sheet. The University of Texas at Austin.
[3] Soil Conservation Service. 1974. Soil Survey of Travis County, Texas. United States Department of Agriculture with the Texas Agriculture Experiment Station.

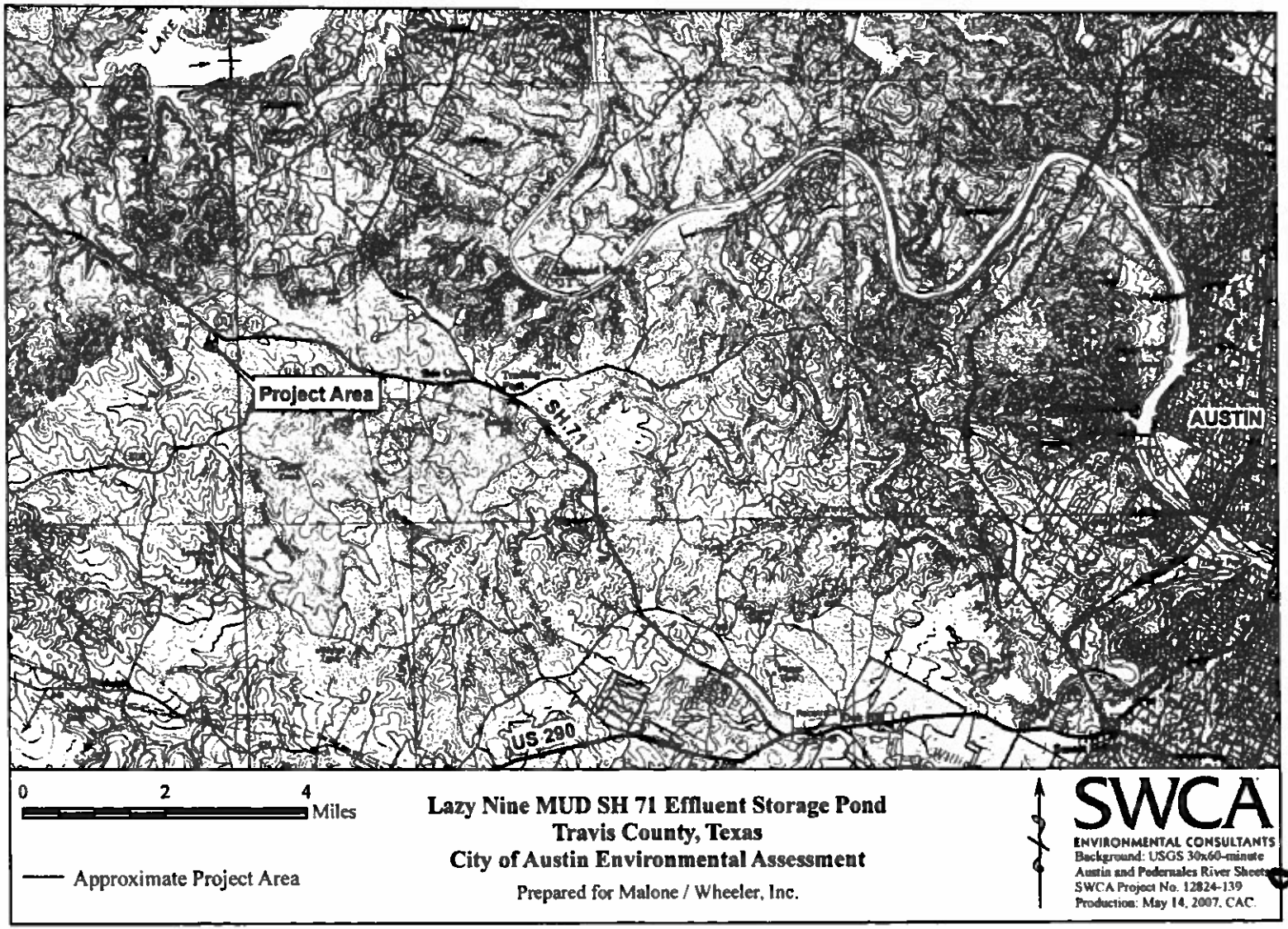

Figure 1. Site Vicinity Map.

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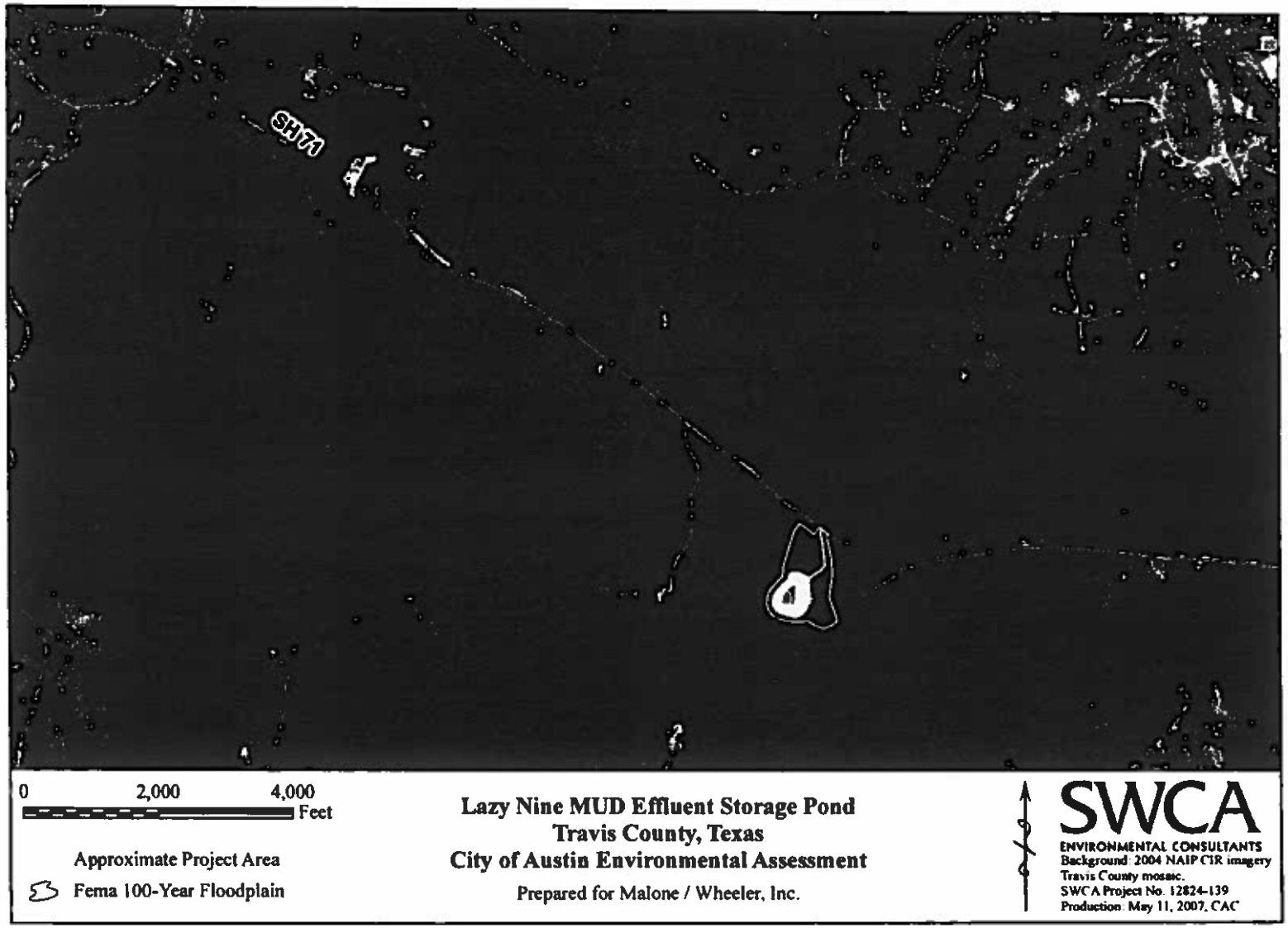

Figure 2. Aerial View Map.

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The next layer is very pale brown (10YR 7/3) clay loam approximately 12 inches thick. The soil is well drained, permeability is moderately slow, and available water capacity is low.

3.0 CRITICAL ENVIRONMENTAL FEATURES

3.1 METHODS AND RESULTS OF CRITICAL ENVIRONMENTAL FEATURES SURVEY

Section 25-8-1 of the LDC defines CEFs as "features that are of critical importance to the protection of environmental resources, and include bluffs, canyon rimrocks, caves, sinkholes, springs, and wetlands. CEFs were searched for by walking the area of the proposed project. Results of the CEF survey are discussed below by category.

Bluffs

A bluff is defined by the COA as an "abrupt vertical change in topography of more than 40 feet with an average slope steeper than four feet of rise for one foot of horizontal travel (400% or 76 degrees)." No bluffs are present within the proposed project area.

Canyon Rimrocks

A canyon rimrock is defined by the COA as an "abrupt vertical rock outcrop of more than 60% slope (31 degrees), greater than 4 feet vertically, and a horizontal extent equal or greater than 50'." No canyon rimrocks are present within the proposed project area.

Caves and Sinkholes

Caves are defined by the COA as "underground voids large enough for an adult to enter." Sinkholes are defined by the COA as "circular or oblong depressions formed in soluble rock by the action of subterranean water which is a potential point of significant recharge (with or without a surface opening)." A systematic search for caves and sinkholes was not conducted because geology indicated that such features did not have potential to occur within the proposed project area.

Springs

Springs are defined by the COA as "points or zones of natural groundwater discharge in upland and/or riparian zones which produce measurable flow down gradient of the source or a pool, or both, or (during drought conditions) an area characterized by the presence of a mesic plant community." No springs are present within the proposed project area.

Wetlands

Wetlands are defined by the COA as "lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. An area shall be classified as a wetland if it meets the Army Corps of Engineers three parameter

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technical criteria as outlined in the Corps of Engineers 1987 Wetlands Delineation Manual (Section D Routine Determinations)." No wetlands are present within the proposed project area.

3.2 ENVIRONMENTAL JUSTIFICATION FOR SPOIL DISPOSAL LOCATIONS AND ROADWAY LOCATIONS

Justification for spoil disposal locations will be provided to the COA under a separate cover if deemed necessary. The proposed project consists of constructing an effluent storage pond that is connected to a treated effluent force main via a 280-foot road extension, the location of which was chosen to ensure the least amount of impact to environmental resources.

4.0 VEGETATION REPORT

4.1 VEGETATION DESCRIPTION

An aerial view of the project area is provided as Figure 3. As can be seen on this figure, the proposed project area primarily supports an open Ashe juniper (*Juniperus ashei*)/live oak (*Quercus fusiformis*) woodland on the hillside where the proposed project area is located. This woodland is composed primarily of large Ashe juniper trees/shrubs with scattered live oak trees present. Most Ashe juniper trees are 3 to 12 feet tall and most live oak trees range from 15 to 25 feet. Understory vegetation is clustered beneath live oak trees and includes agarita (*Berberis trifoliolata*), Ashe juniper, and prickly pear cactus (*Opuntia lindheimeri*). Herbaceous species include buffalograss (*Buchloe dactyloides*), King Ranch bluestem (*Bothriochloa ischaemum*), and purple three-awn (*Aristida purpurea*).

4.2 TREE SURVEY

Delta Survey Group, Inc. surveyed the locations of all trees with diameter-at-breast-height (DBH) of 8 inches or greater along within the proposed project area in 2005. A total of 186 such trees were identified in the project area. Locations of these trees are depicted on Figure 4.

5.0 UTILITIES REPORT

No on-site drainage channels are proposed to be impacted during construction. No on-site wastewater disposal systems are proposed.

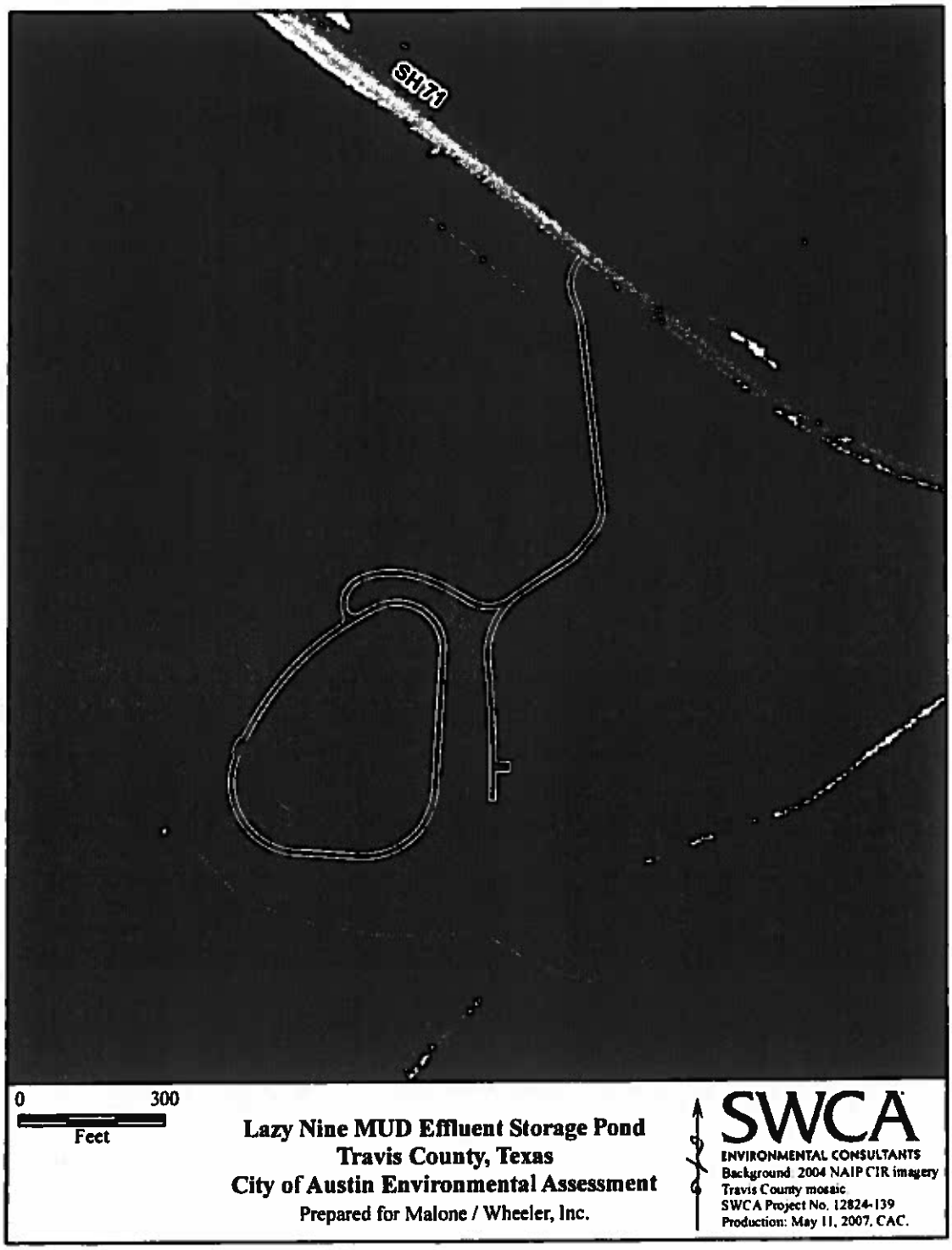

Figure 3. Detailed Project Area.

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Figure 4. Tree Survey Map.

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6.0 ENDANGERED SPECIES

Section 25-8-695 of the COA Land Development Code requires that an endangered species habitat survey be conducted prior to seeking COA approval of construction projects. Species for which habitat surveys must be conducted include: two songbirds, the black-capped vireo (*Vireo atricapilla*) and golden-cheeked warbler (*Dendroica chrysoparia*); one obligate aquatic salamander, the Barton Springs salamander (*Eurycea sosorum*); seven karst invertebrates, the Tooth Cave pseudoscorpion (*Microcreagris texana*), Tooth Cave spider (*Neoleptoneta myopica*), Tooth Cave ground beetle (*Rhadine persephone*), Kretschmarr Cave mold beetle (*Texamaurops reddelli*), Bee Creek Cave harvestman (*Texella reddelli*), Bone Cave harvestman (*Texella reyesi*), and Coffin Cave mold beetle (*Batrisodes texanus*); and two plants, the bracted twistflower (*Streptanthus bracteatus*) and canyon mock-orange (*Philadelphus ernestii*). The vireo, warbler, salamander, and invertebrates are listed as endangered by the U.S. Fish and Wildlife Service ("USFWS"). The plants are not listed by the USFWS, but are considered species of concern by the COA because of their relative scarcity.

For the birds and plants, the Endangered Species Survey Ordinance ("ESSO") generally applies to those lands lying to the west of the Balcones Escarpment; the COA defines this area as mainly west of Loop 1 (Mopac Expressway). For the cave invertebrates, the ESSO applies to those lands lying within the Edwards Aquifer Recharge Zone. The proposed project area lies west of the Balcones Escarpment but outside of the Edwards Aquifer Recharge Zone. Thus, the species covered by the ESSO, that will be considered in this document include the vireo, warbler, bracted twistflower, and canyon mock-orange, but not the karst invertebrates. The Barton Springs salamander is not covered by the ESSO, but will still be considered in this document.

Golden-cheeked Warbler and Black-capped Vireo

Both the golden-cheeked warbler and black-capped vireo are migratory species that are present in Texas only during the breeding season. The breeding range of the golden-cheeked warbler is restricted to central Texas; black-capped vireos breed in the Trans Pecos, Lampasas Cut-Plain, and Edwards Plateau regions of Texas, a few localities in central Oklahoma, and in Coahuila, Mexico.

Most golden-cheeked warblers arrive on breeding grounds in mid-March and depart for their wintering areas in late July. Black-capped vireos typically arrive in central Texas in late March or early April and may be present into September.

Golden-cheeked warblers typically occur in mature woodlands possessing a high percentage of canopy closure and composed of a mixture of Ashe juniper, broad-leafed deciduous, and live oak trees. Texas oak trees are often present in areas occupied by the warbler in Travis County; other tree species that may occur in golden-cheeked warbler habitat include cedar elm, escarpment black cherry, Arizona walnut, and Texas ash (*Fraxinus texensis*). Large junipers are required by the warbler as these trees provide strips of bark from which the birds make their nests.

Black-capped vireos typically occur in areas with thin soil and limestone bedrock that support scrubby vegetation dominated by broad-leafed shrubs. Shin oak (*Q. sinuata* var. *breviloba*) or evergreen sumac is usually common in areas occupied by the vireo in central Texas. Other plant

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species often present in vireo habitat include Texas persimmon, agarita, Ashe juniper, live oak, and flame-leaf sumac. Foliage volume in black-capped vireo habitat is generally high from about 6 to 10 feet in height down to ground level; vegetation occupied by the vireo usually has a relatively open upper canopy layer.

Open woodlands surrounding the proposed project area have been mapped as not containing golden-cheeked warbler habitat (Zone 3) by the Balcones Canyonlands Preserve ("BCP"). To our knowledge, no surveys for golden-cheeked warblers have been conducted within the proposed project area. These open woodlands differ significantly from vegetation communities typically occupied by the warbler. Consequently, it is considered extremely unlikely that golden-cheeked warblers occur along the within the proposed project area.

Vegetation structure within the proposed project area also differs significantly from that found in areas where black-capped vireos typically occur. Vegetation in the proposed project area consists almost wholly of trees and herbaceous species, with shrubs occurring only in very low densities. Because vireos typically occur in relatively dense shrublands, no suitable black-capped vireo habitat is considered present and occurrence of black-capped vireo within the proposed area is considered to be extremely unlikely. No portion of the proposed project area includes any areas mapped as potential black-capped vireo habitat by the BCP.

Plant Species

Bracted twistflower typically occurs in Travis County on wooded slopes with rich soils and well-developed shrub cover, including species such as Mexican silk tassel, shin oak, and evergreen sumac.[4] This species is known to occur in Travis County only on the Edwards Formation in the immediate vicinity of the Balcones Escarpment more than 11 miles east of the project area.[5] Because woodlands in the project area lack significant shrub cover, soils are thin, and overall conditions are relatively xeric, it is considered unlikely that this species occurs along the proposed alignment.

Canyon mock-orange is known only from a few localities in Travis County, but based on these occurrences, the species grows in canyons on steep rock outcrops of the Cow Creek or Edwards Formations, apparently without regard to degree of exposure to sunlight.[6] No potentially suitable habitat for canyon mock-orange is present within the project area; therefore, occurrence of this species in the area is considered to be extremely unlikely.

Barton Springs Salamander

The Barton Springs salamander is known to occur only at four springs located in or near Zilker Park close to the downtown portion of the City of Austin.[7] These four springs, collectively referred to as

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4 City of Austin and Travis County, Texas. 1996. Balcones Canyonlands Preserve, Habitat Conservation Plan and Final Environmental Impact Statement. Prepared by Regional Environmental Consultants and United States Department of the Interior, Fish and Wildlife Service.

5 Ibid (4).

6 Ibid (4).

7 U.S. Fish and Wildlife Service. 1997. Endangered and Threatened Wildlife and Plants, Final Rule to List the Barton Springs Salamander as Endangered. 62 Federal Register. pp 23377-23392.

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"Barton Springs", are fed by flow from the Barton Springs Segment of the Edwards Aquifer, with the salamander having some potential to occur in groundwater within the Edwards Aquifer. This aquifer is fed by infiltration of precipitation within the recharge zone (the exposed outcrop of the Edwards Formation), as well as by stream flow loss within the recharge zone from creeks that have watersheds extending up-gradient from the recharge zone. That portion of the watersheds occurring above the recharge zone is referred to as the "contributing zone."

As discussed, the Glen Rose Formation underlies the property; thus, no potential exists for the Barton Springs salamander to occur on the property. Although the proposed project lies outside the recharge zone of the Barton Springs Segment of the Edwards Aquifer, the property is located within the Little Barton Creek watershed, which crosses the contributing zone for the Barton Springs Segment of the Edwards Aquifer downstream.[8] Consequently, activities occurring on the property have the potential to adversely affect the quality or quantity of water discharging at Barton Springs and, thus, may have potential to adversely affect the Barton Springs salamander. Erosion control and water quality control measures are planned for the proposed project to prevent the discharge into the Little Barton Creek Watershed. Erosion control measures include silt fencing and rock berms surrounding the proposed project area and construction staging area. A sedimentation basin will be used as a short-term water quality control measure to collect and contain runoff before discharge can occur and will be removed upon completion of the project. The installation of vegetative filter strips will serve as the long-term water quality control measure. Therefore, no adverse impacts to the Barton Springs salamander are expected to occur from the construction and/or utilization of the proposed effluent storage pond.

[8] Slade, R. M., M. E. Dorsey, and S. L. Stewart. 1986. Hydrology and water quality of the Edwards Aquifer associated with Barton Springs in the Austin area, Texas. U.S. Geological Survey Water-Resources Investigations Report 86-4036.

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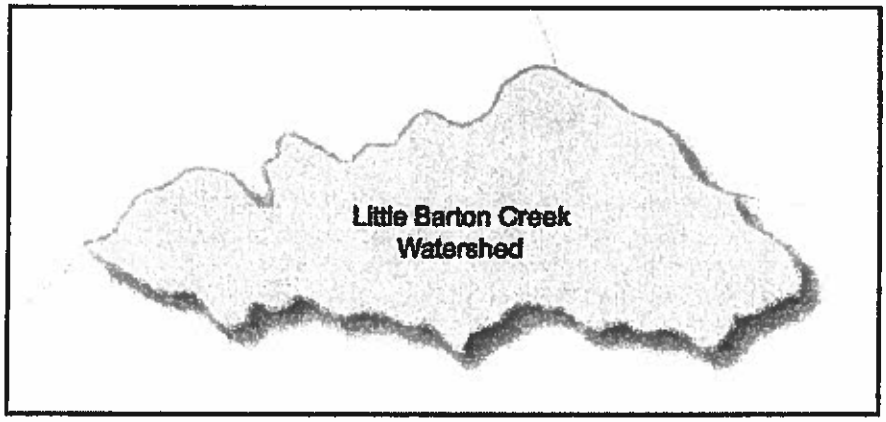
Austin's Watersheds



Fast Facts Photo Gallery

Environmental Creek Assessments

Fast Facts

Population	2000: 459 2030: 4,076	
Creek Length	10 miles	
Drainage Area	11 square miles	
Drains To	Barton Creek	
Well Known Sites	There are no sites open to the public	
Land Use	Residential	9%
	Business	2%
	Civic	1%
	Parks	1%
	Roadways	2%
	Undeveloped	85%

Watershed Facts

- Little Barton Creek is one of the largest tributaries of Barton Creek, flowing east along Highway 71;, it crosses Hamilton Pool Road and the town of Bee Caves; its mouth is located upstream of Barton Creek near Highway 71.
- Little Barton Creek runs through many old ranches and an old restored settlement which is located on Highway 71 where Little Barton Creek meets Barton Creek.

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Creek Assessments

Environmental

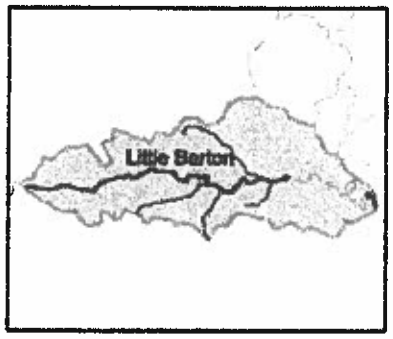
Index	Score	Category	Notes
Overall Score	78	Very Good	Little Barton ranks 3 out of 46 watersheds in overall quality
Water Chemistry	67	Good	Water quality is above average
Sediment Quality	92	Excellent	PAHs are very low, herbicides/pesticides are very low, metals are very low
Recreation	91	Excellent	During dry weather conditions, bacteria is not a threat
Aesthetics	89	Excellent	Litter is not a problem, no odor, water is slightly cloudy
Habitat	55	Fair	Some sediment deposition
Aquatic Life	71	Good	Benthic macroinvertebrate community is good, diatom community is excellent

- Although historically Little Barton has maintained good water quality, continuing development outside of the City of Austin jurisdiction is expected to impact water quality.
- Presence of pollution-intolerant diatom species suggest healthy community.

Learn More

How to Help

Environmental scores are based on a full range of chemical, biological, and physical assessments.



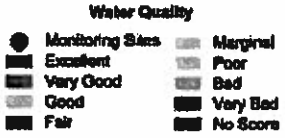


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Photo Gallery

Little Barton Creek at Hamilton Pool Road

Little Barton Creek at Barton Creek

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